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ABSTRACT

Included in the daily program are listings of demonstration events, film showings, sports activities and session offerings. After a greeting from Jean Kennedy Smith for the Kennedy Foundation, the Special Olympics program is reviewed and ways are suggested for developing a local program. Discussed are new dimensions in physical education for the handicapped; also considered are methods, procedures, and planning for a comprehensive high school physical education program for severly physical handicapped (PH) students. Perceptive motor-development exercise are presented by objective, learning experience, and resource for preprimary through intermediate level educable mentally retarded (EMR) and trainable mentally retarded (TMR) students in areas such as sensory awareness; and for primary through advanced level emotionally disturbed (ED), learning disabled, brain injured, and visually impaired students in areas such as spatial relationships. The following exercises are presented in the same format: physical fitness exercises for all age levels of handicapped students; aquatic exercises for primary and intermediate TMR and hearing impaired students; basic conditioning exercises for gymnastics for intermediate and advanced EMR and TMR students; lead up skills for group games and team sports for intermediate ED and PH students; and corrective, developmental, and recreational activities for children with chronic respiratory conditions and for Milwaukee brace wearers. A conference evaluation and sources of materials are appended. (MC)

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OCTOBER 1-3, 1972 • ITHACA COLLEGE

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PROCEEDINGS

from

THE FIRST STATEWIDE CONFERENCE

on

PHYSICAL EDUCATION FOR HANDICAPPED CHILDREN AND YOUTH

Sunday, Monday, and Tuesday, October 1-3, 1972
Ithaca College in Ithaca, New York

sponsored by

THE NEW YORK STATE EDUCATION DEPARTMENT
Division for Handicapped Children
Division of Physical Education and Recreation
Division of Curriculum Development

in cooperation with

ITHACA COLLEGE
School of Health, Physical Education, and Recreation

and

TOMPKINS - SENECA - TIOGA COUNTY BOCES

under a grant from

P.L. 91-230

CONFERENCE PLANNING COMMITTEE

Raphael F. Simches
Assistant Director, Division for Handicapped Children, New York State Education Department

George H. Grover
Director, Division of Physical Education and Recreation, New York State Education Department

Gordon E. Van Hooft
Director, Division of Curriculum Development, New York State Education Department

Eugene T. DeLuca
Director of Undergraduate Physical Education and Recreation, Ithaca College

Arnold E. Wilhelm
Professor of Physical Education, Ithaca College

Edward S. Witko
Superintendent, Tompkins-Seneca-Tioga County BOCES

Michael R. Pronti
Administrative Assistant for Special Education, Tompkins-Seneca-Tioga County BOCES

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Associate in Education of Mentally Retarded, New York State Education Department

Gerald J. Hase
Associate in Physical Education and Recreation, New York State Education Department

Theodore E. Kurtz, *Chairman*
Associate in Education for the Emotionally Handicapped New York State Education Department

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ssociate in Secondary Curriculum, New York State Education Department

Joanne W. Sculli, *Chairman*
Associate in Physical Education and Recreation, New York State Education Department

CONFERENCE DIRECTOR

Robert J. Caliel
Associate Professor of Physical Education, Ithaca College

CONFERENCE HOST

William B. Koch
Dean, School of Health, Physical Education, and Recreation, Ithaca College

FOREWORD

On October 1-3, 1972, more than 1200 public, private, and parochial school teachers and administrators; college or university students and professors; Board of Cooperative Educational Services personnel; school board members; parents; and other community representatives participated in The First Statewide Conference on PHYSICAL EDUCATION FOR HANDICAPPED CHILDREN AND YOUTH.* Both in content and in purpose, the conference underscored the inherent value of *each individual human being* and the importance of his contribution to, and his involvement in, the community.

Sponsored by the New York State Education Department, in cooperation with Ithaca College and the Tompkins-Seneca-Tioga County BOCES, the conference attempted to improve experiences in physical education and recreation for *all* children — regardless of handicap — by:

- Acquainting special education teachers with effective ways of using developmental physical education activities with their pupils;
- Increasing the physical education teacher's understanding of and ability to work with the special child's interests, needs, capabilities, and limitations;
- Building stronger liaisons between physical education and special education teachers which would make more effective use of individual expertise in both areas;
- Stimulating chief school officers and other leadership personnel to develop or improve demonstrably effective physical education programs for handicapped children and youth;
- Inspiring undergraduate and graduate students in colleges and universities to prepare themselves for occupations concerned with the physical education of handicapped children; and
- Stimulating similar conferences and workshops at local and/or regional levels.

With these objectives in mind, some of the finest teacher/specialists in adapted physical education were invited to prepare a series of model instructional units and then to demonstrate them at the conference with representative groups of handicapped children. These units, plus the speeches given at the opening session, comprise the "proceedings" in this publication. A copy of the full conference program, a general profile of the participants, and an evaluation report have also been included.

The success of any happening as comprehensive as The First Statewide Conference on PHYSICAL EDUCATION FOR HANDICAPPED CHILDREN AND YOUTH is dependent upon careful planning, cooperative effort, and *an unremitting attention to detail.* In this case, the concerns included safely transporting busloads of handicapped children to and from specific destinations at specific times on tightly devised schedules; arranging box lunches, dinner, a pizza party, and overnight lodging for the participating youngsters; and procuring clearly identified numbers of hoola hoops, inner tubes, high and low balance beams, mats, trampolines, etc. — which not only had to be available at particular times and places, but had to be returned as well. For these and a thousand other deeds and services that helped to make the conference a memorable one for all concerned, **Bette Hollern** of the Tompkins-Seneca-Tioga County BOCES and the following persons from the Ithaca College School of Health, Physical Education and Recreation* deserve special recognition:

---

*See the participant profile on p. 161 for a more complete listing.

Helen Blauvelt, Professor of Anatomy

Herbert E. Broadwell, Associate Professor of Physical Education

Edmund J. Burke, Jr., Assistant Professor of Physical Education

Philip J. Butterfield, Jr., Assistant Professor of Physical Education

Iris Carnell, Associate Professor of Physical Education

Robert Charney, Instructor in Physical Education

Robert Congdon, Associate Professor of Physical Education

Gordon Eggleston, Assistant Professor of Physical Education

Fenwick Faulkner, Instructor in Physical Education

A. Craig Fisher, Assistant Professor of Physical Education and Chairman of Graduate Programs

Mearl H. Greene, Associate Professor of Physical Education

Joseph L. Hamilton, Professor of Physical Education

Hugh Hurst, Assistant Professor of Physical Education

Gordon Forbes Keith, Instructor of Physical Education

Martha M. Kelsey, Professor of Physical Education

Franklin Kennedy, Assistant Professor of Physical Education

Charles A. Kerr, Assistant Professor of Physical Education

Beverly Klausner, Assistant Professor of Physical Education

Doris Kostrinsky, Assistant Professor of Physical Education

Walter R. Lalor, Assistant Professor of Physical Education

Rita D. LaRock, Professor of Physical Education

Kenneth E. Long, Assistant Professor of Physical Education

Louis R. Munch, Assistant Professor of Physical Education

Christine Nicoloff, Assistant Professor of Physical Education

Edward Pesaresi, Associate Professor of Physical Education

Sara M. Rich, Visiting Professor

Kent Scriber, Assistant Athletic Trainer

William F. Straub, Professor of Physical Education

William H. Ware, Assistant Professor of Physical Education

Carlton L. Wood, Associate Professor of Physical Education and Chairman of Intercollegiate Athletics

Deborah A. Wuest, Instructor of Physical Education

In addition, a special note of thanks should be extended to:

- **Mary Gryc, Linda Lazzaro**, and their teachers at the New York State School for the Blind, in Batavia, New York — for their musical contribution to the opening session of the conference;
- **Ronald Schuler** and the team from the New York State School for the Deaf, in Rome, New York and **Glen Stevens** and

*Teachers and administrators from Ithaca College or the Tompkins-Seneca-Tioga County BOCES whose names appear on the back of the title page in this publication are not listed here.

the team from Stockbridge Central School in Stockbridge, New York — for their lively demonstration of eight-man football;

- **Joseph Meskill**, junior high school principal, and **Wesley Somerville**, physical education teacher, from Trumansburg Central School in Trumansburg, New York — for refereeing the game; and
- **Daniel Sullivan** and the team from the Human Resources School in Albertson, Long Island, New York and **Robert Calgano** and the members of Phi Epsilon Kappa Fraternity at Ithaca College — for participating in a highly competitive game of wheelchair basketball.

The conference was designed and supervised by a steering committee drawn from three units in the State Education Department: the Division for Handicapped Children, the Division of Physical Education and Recreation, and the Division of Curriculum Development. For the most part, any success it may have enjoyed is directly attributable to the quality, efforts, and showmanship of the consultants and their pupil/demonstrators; but the greatest accolades belong to **Robert J. Caliel**, the conference director, whose insight, dedication, and administrative ability made a reality of the committee's plan. **Philip K. Langan**, director of sports information for the Ithaca College Office of Public Affairs and **Arnold M. Bloom**, Director of Public Information for the State Education Department, coordinated the public relations aspects of the conference. All written materials, including these proceedings, were prepared for publication by **Rita A. Sator**, associate in secondary curriculum development, and approved by the committee. **Robert H. Bonnell**, coordinator of photographic services for the Ithaca College Office of Public Affairs, supplied the photographs.

Raphael F. Simches
Assistant Director, Division
for Handicapped Children

George H. Grover
Director, Division of Physical
Education and Recreation

Gordon E. Van Hooft
Director, Division of
Curriculum Development

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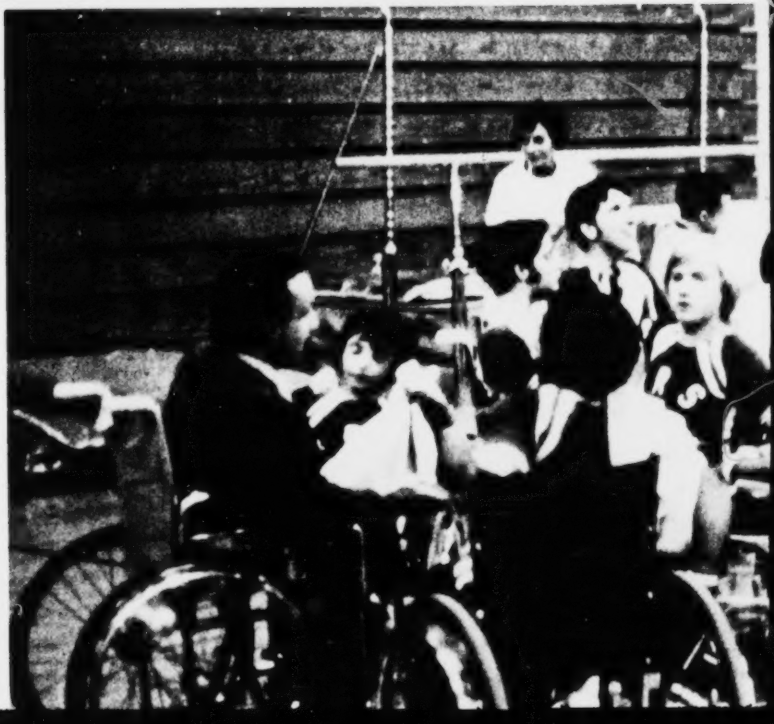
The Program



SUNDAY, OCTOBER 1, 1972

2:00-7:30 p.m.	Registration	Hill Physical Education Center
2:00-5:30 p.m.	Exhibits	Gymnasium 3
2:00-5:30 p.m.	Campus tours	Main Lobby
3:00-5:30 p.m.	Swimming	Pool
3:00-5:30 p.m.	Bowling	Bowling Lanes
2:00-5:00 p.m.	Film showings	Gymnastics Room
2:00 p.m.	*AIDS FOR TEACHING THE MENTALLY RETARDED — Phase A: Motor Training*	11 min.
2:15 p.m.	*AIDS FOR TEACHING THE MENTALLY RETARDED — Phase B: Initial Perceptual Training*	8 min.
2:26 p.m.	*AIDS FOR TEACHING THE MENTALLY RETARDED — Phase C: Advanced Perceptual Training*	9 min.
2:38 p.m.	*AIDS FOR TEACHING THE MENTALLY RETARDED — Phase D: Integrated Motor Perceptual Training*	6 min.
2:47 p.m.	*AIDS FOR TEACHING THE MENTALLY RETARDED — Phase E: Sheltered Workshop*	5 min.
3:00 p.m.	*DEMONSTRATION LESSON IN PHYSICAL EDUCATION*	28 min.
3:35 p.m.	*LOOKING FOR ME*	29 min.
4:10 p.m.	*MOVIGENIC CURRICULUM*	41 min.
8:00-9:30 p.m.	Opening session	Ford Auditorium
	Musical Introduction (classical selections) **Linda Lazzaro**, Senior Student, accompanied by **Muriel K. Mooney**, Music Instructor, from the New York State School for the Blind at Batavia	
	Convocation **William Koch**, Conference Host and Dean of the School of Health, Physical Education, and Recreation, Ithaca College	
	Welcome **Ellis L. Phillips, Jr.**, President, Ithaca College	
	"New Dimensions in Physical Education for the Handicapped" **Leo A. Soucy**, Assistant Commissioner for School Services, New York State Education Department	
	Musical Interlude (popular selections) **Mary Gryc**, Senior Student, New York State School for the Blind at Batavia	
	"Miles To Go Before We Sleep . . ." **Jean Kennedy Smith**, The Joseph P. Kennedy, Jr., Foundation **Glenn C. Randall**, Executive Director, Special Olympics, The Joseph P. Kennedy, Jr., Foundation	
	Announcements **Robert J. Caliel**, Conference Director and Associate Professor of Physical Education, Ithaca College	
9:30-11:00 p.m.	Reception **Harriett Carnes**, Conference Hospitality Chairman and Assistant Professor of Physical Education, Ithaca College	West Terrace Dining Hall

MONDAY, OCTOBER 2, 1972

8:00-5:30 p.m.	Exhibits	Gymnasium 3
8:30-9:45 a.m.	Session I — Presentation	
	A. "Maturation and Change in Ability Traits: Implications for Educators"	Gymnasiums 1 & 2
	Consultant: **Bryant J. Cratty**, Professor of Physical Education and Director of the Perceptual Motor Learning Laboratory, University of California at Los Angeles	
	Host: E. Victor Boyd, Acting Chief, Bureau of Guidance, New York State Education Department	
10:00-11:15 a.m.	Session II — Demonstration	
	A. "The Use of Movement in the Acquisition of Selected Academic Abilities"	Gymnasium 1
	Consultant: **Bryant J. Cratty**, Professor of Physical Education and Director of the Perceptual Motor Learning Laboratory, University of California at Los Angeles	
	B. "Developing Patterns of Movement and Movement Awareness"	Gymnasium 2
	Consultants: **Ralph Bova**, Coordinator of Physical Education Resource Programs for Children with Retarded Mental Development, Board of Education of the City of New York **Ralph Provenza** and **Neil Stoller**, Resource Specialist-Teacher Trainers, Bureau for Children with Retarded Mental Development, Board of Education of the City of New York	
	Hostess: Madeline Dalton, Acting Director, Bureau for Children with Retarded Mental Development, Board of Education of the City of New York	
	C. "Enhancement of the Visual Modality: Symbolization and Prereading Skills"	Wrestling Room
	Consultant: **Charles A. Aliberto**, Director of the ESEA, Title I Gross Motor Development Program in Reading and Physical Education, Dover Union Free School District #2, Dover Plains, New York	
	Host: Randall Garrett, Senior Student, School of Health, Physical Education, and Recreation, Ithaca College	
	D. "Developing Body Awareness, Body Orientation in Space and Total Motor Coordination Through Activities in Rhythmic Movement"	Dance Studio
	Consultant: **Elizabeth Polk**, Registered Dance Therapist and Assistant Professor at Adelphi University, Long Island, New York	
	Host: John A. Quatraro, Associate in Music Education, New York State Education Department	
	Film showings	Gymnastics Room
10:00 a.m.	*PHYSICAL EDUCATION: LEVER TO LEARNING*	20 min.
10:25 a.m.	*PHYSICAL EDUCATION FOR BLIND CHILDREN*	20 min.
10:50 a.m.	*PROGRAM OF DEVELOPMENTAL MOTOR ACTIVITY*	22 min.

11:30-12:45 p.m. Session III — Demonstration

A. "Innovations in Physical Education for the Physically Handicapped: How To Do a Lot with a Little" — Part I — Gymnasium 1

Consultant: **James DeBell**, Head of the Department of Health and Physical Education, Jefferson High School, Rochester, New York

Host: Nick Zona, Director of Health and Physical Education, City School District, Rochester, New York

B. "Body Management, Self-testing Activities, and Teaching Progressions for Gymnastics" — Part I — Gymnasium 2

Consultant: **Emilio DaBramo**, Director of Physical Education, Mamaroneck Public Schools, Mamaroneck, New York

Hostess: Dorothy W. Buehring, Associate in Education for the Mentally Handicapped, New York State Education Department

C. "Developing Motor Coordination Through Prebasketball Training" — Wrestling Room

Consultant: **Robert Lane**, Supervisor of Physical Education and Recreation, Arthur Brisbane Child Treatment Center, Allaire, New Jersey

Host: John P. Rentz, Assistant in Physical Education and Recreation, New York State Education Department

D. "Developing Concentration and a Sense of Order Through Enjoyable Activities in Physical Education" — Dance Studio

Consultant: **Paul H. Winiecki**, Physical Education Teacher, Orchard Park Junior High School, Orchard Park, New York

Host: Charles Matkowski, Associate in Education for the Emotionally Handicapped, New York State Education Department

E. "The Use of Total Body Activity To Stimulate the Use of Selected Intellectual Abilities" — Gymnastics Room

Consultant: **Bryant J. Cratty**, Professor of Physical Education and Director of the Perceptual Motor Learning Laboratory, University of California at Los Angeles

F. "Swimming Techniques for the Handicapped" — Part I — Pool

Consultant: **Frederick C. McCurry**, Assistant Director, Onondaga County Chapter, New York State Association for Retarded Children, Inc., Syracuse, New York

Host: William Ware, Assistant Professor of Physical Education, Ithaca College

1:00-2:15 p.m. Luncheon — West Terrace Dining Hall

2:30-3:45 p.m. Session IV — Demonstration

A. "Innovations in Physical Education for the Physically Handicapped: How To Do a Lot with a Little" — Part II — Gymnasium 1

Consultant: **James DeBell**, Head of the Department of Health and Physical Education, Jefferson High School, Rochester, New York

Host: Roger Bunce, Director of Physical Education and Recreation, West Irondequoit Central School District, West Irondequoit, New York

B. "Abnormal Curvatures of the Spine: Physical Education Guidelines for the Milwaukee Brace Wearer" — Gymnasium 2

Consultant: **Ronald C. Adams**, Director of Therapeutic Recreation and Adapted Physical Education, University of Virginia Hospital Children's Rehabilitation Center, Charlottesville, Virginia

Host: Robert Sprague, Director of Physical Therapy, School of Allied Health Professions, Ithaca College

C. "Helping Visually Handicapped Students To Develop Body Awareness and Increased Coordination of Body Movements" — Wrestling Room

Consultant: **Samuel F. Paradise**, Head of the Physical Education and Orientation/Mobility Department, New York State School for the Blind, Batavia, New York

Host: Thomas A. Patterson, Superintendent, New York State School for the Blind, Batavia, New York

D. "Model Units of Instruction for Children with Chronic Respiratory Conditions" — Dance Studio

Consultant: **Martilu Puthoff**, Associate Professor of Physical Education, State University College at Brockport, Brockport, New York

Hostess: Joanne W. Sculli, Associate in Physical Education and Recreation, New York State Education Department

Film Showings — Gymnastics Room

2:30 p.m. *RECREATION CENTER FOR THE HANDICAPPED* — 23 min.
2:58 p.m. *SPLASH!* — 25 min.
3:32 p.m. *THERAPY THROUGH PLAY* — 30 min.

3:30-5:00 p.m. Eight-man Football Game — Varsity Football Stadium

New York State School for the Deaf, Rome, New York

Ronald Schuler, Head Coach

vs.

Stockbridge Central School, Stockbridge, New York

Glen Stevens, Head Coach

4:00-5:15 p.m. Session V — Crackerbarrel

A. "Outdoor Education for Special Students" — Gymnasium 2

Emilio DaBramo, Director of Physical Education, Mamaroneck Public Schools, Mamaroneck, New York

B. "Nature and Availability of Resources" — Dance Studio

Lawrence Gloeckler, Associate, Special Education Instructional Materials Center, New York State Education Department

Julian U. Stein, Consultant, Programs for the Handicapped, American Association for Health, Physical Education, and Recreation

Martha Brown, Assistant Professor, State University College at Buffalo, and Project Associate, Special Education Instructional Materials Center, Buffalo, New York

C. "An Undergraduate Emphasis in Physical Education for the Handicapped Child" — Classroom P-2

M. Louise Moseley, Assistant Professor, Women's Physical Education Department, State University College at Cortland, Cortland, New York

Suzzane E. Wills, Assistant Professor, Women's Physical Education Department, State University College at Cortland, Cortland, New York

D. "Professional Development" — Classroom P-3

Joseph P. Winnick, Associate Professor, Sports Science Department, State University College at Brockport, Brockport, New York

E. "Development and Administration of Programs" — Classroom P-4

Martilu Puthoff, Associate Professor of Physical Education, State University College at Brockport, Brockport, New York

F. "Community Recreation Programs" — Classroom P-5

Joseph Rogoff, Assistant Director, Department of Recreation and Community Activities, Oyster Bay, Long Island, New York

Robert Cutia, Director of Youth Recreation, Ithaca, New York

	Film Showings	Gymnastics Room
4:07 p.m.	*LOOKING FOR ME*	29 min.
4:40 p.m.	*RECREATION CENTER FOR THE HANDICAPPED*	23 min.
5:07 p.m.	*MOVIGENIC CURRICULUM*	41 min.
4:00-5:30 p.m.	**Swimming**	Pool
	Bowling	Bowling Lanes
8:00-9:30 p.m.	**Wheelchair Basketball Game**	Gymnasiums 1 & 2

Human Resources School, Albertson, Long Island, New York

Daniel Sullivan, Head Coach

vs.

Phi Epsilon Kappa Fraternity, Ithaca College, Ithaca, New York

Robert Calgano, Coach

Host: Robert Erb, Associate in Education for the Physically Handicapped, New York State Education Department

TUESDAY, OCTOBER 3, 1972

8:30-12:45 p.m. Exhibits — Gymnasium 3

8:30- 9:45 a.m. Session VI - Demonstration

A. "Sequential Progression for Fun and Fitness" — Gymnasiums 1 & 2

Consultant: **Julian U. Stein**, Consultant, Programs for the Handicapped, American Association for Health, Physical Education, and Recreation, Washington, D. C.

Host: Dr. Onslow A. Gordon, State Medical Inspector of Schools, Bureau of Health Service, New York State Education Department

10:00-11:15 a.m. Session VII - Demonstration

A. "Potpourri of Fun Activities for Fitness" — Gymnasium 1

Consultant: **Julian U. Stein**, Consultant, Programs for the Handicapped, American Association for Health, Physical Education, and Recreation, Washington, D. C.

B. "Body Management, Self-testing Activities, and Teaching Progressions for Gymnastics" - Part II — Gymnasium 2

Consultant: **Emilio DaBramo**, Director of Physical Education, Mamaroneck Public Schools, Mamaroneck, New York

Hostess: Dorothy W. Buehring, Associate in Education for the Mentally Handicapped, New York State Education Department

C. "Balancing Activities with Varied Equipment" — Wrestling Room

Consultants: **Ralph Bova**, Coordinator of Physical Education Resource Programs for Children with Retarded Mental Development, Board of Education of the City of New York

Ralph Provenza, Resource Specialist-Teacher Trainer, Bureau for Children with Retarded Mental Development, Board of Education of the City of New York

Hostess: Madeline Dalton, Acting Director, Bureau for Children with Retarded Mental Development, Board of Education of the City of New York

D. "Developing Body Awareness, Body Orientation in Space, and Total Motor Coordination Through Activities in Rhythmic Movement" (Repeat, with variations) — Dance Studio

Consultant: **Elizabeth Polk**, Registered Dance Therapist and Assistant Professor at Adelphi University, Long Island, New York

Host: John A. Quatraro, Associate in Music Education, New York State Education Department

E. "Fine Motor Coordination: Hearing Discrimination and Rhythms" — Classroom P-5

Consultant: **Neil Stoller**, Resource Specialist-Teacher Trainer, Bureau for Children with Retarded Mental Development, Board of Education of the City of New York

Film showings — Gymnastics Room

10:00 a.m. *SPLASH!* — 25 min.

10:30 a.m. *PHYSICAL EDUCATION: LEVER TO LEARNING* — 20 min.

10:55 a.m. *AIDS FOR TEACHING THE MENTALLY RETARDED - Phase C: Advanced Perceptual Training* — 9 min.

11:09 a.m. *AIDS FOR TEACHING THE MENTALLY RETARDED - Phase D: Integrated Motor Perceptual Training* — 6 min.

11:30-12:45 p.m. Session VIII - Demonstration

A. "Developing Eye-Hand Coordination Through Prebaseball Training" — Gymnasium 1

Consultant: **Robert Lane**, Supervisor of Physical Education and Recreation, Arthur Brisbane Child Treatment Center, Allaire, New Jersey

Host: John P. Rentz, Assistant in Physical Education and Recreation, New York State Education Department

B. "Developing Concentration and a Sense of Order Through Enjoyable Activities in Physical Education" (Repeat, with variations) — Gymnasium 2

Consultant: **Paul H. Winiecki**, Physical Education Teacher, Orchard Park Junior High School, Orchard Park, New York

Host: Charles Matkowski, Associate in Education for the Emotionally Handicapped, New York State Education Department

C. "Enhancement of the Auditory Modality: Sound Discrimination and Rhythm" — Wrestling Room

Consultant: **Charles A. Aliberto**, Director of the ESEA, Title I Gross Motor Development Program in Reading and Physical Education, Dover Union Free School District #2, Dover Plains, New York

Host: Randall Garrett, Senior Student, School of Health, Physical Education, and Recreation, Ithaca College, Ithaca, New York

D. "Scientific Relaxation and Tension Control" — Dance Studio

Consultant: **Martilu Puthoff**, Associate Professor of Physical Education, State University College at Brockport, Brockport, New York

Hostess: Rita A. Sator, Associate in Secondary Curriculum, New York State Education Department

E. "Applications of the Computer-Based Resource Unit on Movigenics" — Gymnastics Room

Consultant: **Martha Brown**, Assistant Professor, State University College at Buffalo, and Project Associate, Special Education Instructional Materials Center, Buffalo, New York

Hostess: Marsha Gatski, Senior Student, School of Health, Physical Education, and Recreation, Ithaca College, Ithaca, New York

F. "Swimming Techniques for the Handicapped" - Part II — Pool

Consultant: **Frederick C. McCurry**, Assistant Director, Onondaga County Chapter, New York State Association for Retarded Children, Inc., Syracuse, New York

Host: William Ware, Assistant Professor of Physical Education, Ithaca College, Ithaca, New York

1:00-2:30 p.m. Luncheon/forum - "Where Do We Go From Here?" West Terrace Dining Hall

Gordon E. Van Hooft, Director, Division of Curriculum Development, New York State Education Department

James F. Winchell, Associate Professor of Special Education, Syracuse University, Syracuse, New York

George H. Grover, Director, Division of Physical Education and Recreation, New York State Education Department

Julian U. Stein, Consultant, Programs for the Handicapped, American Association for Health, Physical Education, and Recreation, Washington, D. C.

M. Louise Moseley, Assistant Professor, Women's Physical Education Department, State University College at Cortland, Cortland, New York

O. Reginald Brown, Director of Recreation Services and Cultural Affairs, New York State Office of Parks and Recreation

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FILM THEATER OFFERINGS

sponsored by

THE NEW YORK SPECIAL EDUCATION INSTRUCTIONAL
MATERIALS CENTER NETWORK

AIDS FOR TEACHING THE MENTALLY RETARDED — 38 min. color sound

Phase A: Motor Training — 11 min. color sound

A variety of obstacles and devices introduce the child to a variety of sensations and experiences through which he may increase motor control and gain awareness of his body and what it can perform.

Phase B: Initial Perceptual Training — 8 min. color sound

Exercises involving sensory areas are provided to help improve perceptual skills, develop manual dexterity and improve eye-hand coordination.

Phase C: Advanced Perceptual Training — 9 min. color sound

Building upon previous exercises, new experiences are provided that help the student to make decisions and draw conclusions. The child learns to manipulate devices which can be adjusted to his level of dexterity and can be altered to challenge his increasing skills.

Phase D: Integrated Motor Perceptual Training — 6 min. color sound

This step includes activities that integrate movement and perception skills.

Phase E: Sheltered Workshop — 5 min. color sound

Actual work experiences, adjusted to the levels of their abilities, are offered to students in the training phase of the sheltered workshop program. Working on a sub-contract basis, they process products that are used in the consumer market.

A DEMONSTRATION LESSON IN PHYSICAL EDUCATION — 28 min. b/w sound

The film depicts approaches, techniques, and activities included in the physical education program for children with a mean I.Q. of 72 and a mean chronological age of 13. The following activities are demonstrated: responding to commands, lining up and counting off, running relay races, using narrative and creative warmup activities, teaching tumbling activities, and doing partner stunts

JUST FOR THE FUN OF IT — 18½ min. color sound

This film presents a series of physical activities for mentally handicapped children, ranging from the most simple to the more complex, performed by youngsters ranging from 5 to 21 years of age in a capability span from 2 to 12 years.

LOOKING FOR ME — 29 min. b/w sound

The use of dance and movement as a therapeutic tool is explained by dance therapist Janet Adler as she reports on a research project in which she investigated the therapeutic benefits of patterned movement in her work with four groups: normal preschoolers, emotionally disturbed children, autistic children, and adult teachers.

MOVIGENIC CURRICULUM — 41 min. b/w sound

An experimental curriculum for children with learning behavior disorders is explained. Shown are a variety of movement activities emphasizing muscular strength, balance, body awareness, spatial awareness, visual training, auditory dynamics, kinesthesia, tactual dynamics, bilaterality, rhythm, flexibility, and motor planning.

PHYSICAL EDUCATION: LEVER TO LEARNING — 20 min. color sound

Educable mentally retarded boys and girls from public school special education programs are shown taking part in motor skills and physical fitness activities designed to reinforce academic learning.

PHYSICAL EDUCATION FOR BLIND CHILDREN — 20 min. color sound

Presents blind children of all ages in public and residential schools performing a wide variety of physical education activities.

PROGRAM OF DEVELOPMENTAL MOTOR ACTIVITY — 22 min. color sound

Four recognized levels of development (moving legs and arms without forward movement; crawling; creeping; and walking) are demonstrated by student clinicians who are working with youngsters in different activities and with a variety of approaches which promote neurological organization.

RECREATION CENTER FOR THE HANDICAPPED — 23 min. color sound

Shows severely handicapped people who are active in checkers, music activities, table games, wrestling, swimming, fishing, casting, woodworking, playground activities, and snow and winter activities.

SPLASH! — 25 min. color sound

Water activities, educational and recreational, are presented for use with handicapped youngsters of all types. Floating, sitting in water, and swimming all make body movements easier and the development of motor coordination skills more "fun" through the learning of water games.

THERAPY THROUGH PLAY — 30 min. b/w sound

This film documents the excellent and extensive physical education program at the Human Resources School, Albertson, New York, and illustrates the many interests and abilities of the severely orthopedically handicapped.

The Proceedings

The addresses, reports, and instructional units presented at the conference and included in this publication were prepared by specialists identified by the New York State Education Department's Division for Handicapped Children and Division of Health, Physical Education, and Recreation. Since the specialists were expected to exercise professional judgment in their presentations, the statements, opinions, and suggestions on the following pages are considered valid — but do not necessarily represent official State Education Department policy or endorsement.

GREETINGS

Jean Kennedy Smith

The Joseph P. Kennedy, Jr., Foundation

I am honored to be here on behalf of Eunice Kennedy Shriver to participate in this first Statewide conference on physical education and recreation for handicapped children and youth. I regret that my sister could not attend, because I know that she had planned to be here since last January. My pride in being here is deep, arising as it does from both personal and public reasons.

As you know, my family's interest in and commitment to the cause of helping the mentally retarded originated more than half a century ago with the birth of my sister Rosemary. Then, as now, New York has been in the forefront of efforts to assist the handicapped. But the services and facilities available to our parents at that time were meager indeed. Over the years, therefore, we have developed a very strong appreciation for the opportunities that can be created and the miracles that can be wrought when the genius of sensitive and dedicated people is combined with resources and facilities. This conference, by building stronger working relationships between physical education and special education teachers, will make more effective use of individual expertise in both areas.

It has been especially satisfying for me to help the handicapped. For two years I have conducted summer camps at my home in New York. I have tested, trained, and encouraged youngsters and teachers alike to participate in fitness programs. I have knocked on the doors of city halls, schools, colleges, and institutions, encouraging them to start physical education and recreation programs for the retarded.

In the early 1960's, it was my sister Eunice who first discussed with my father and with President Kennedy the idea of establishing a national commission to survey the problems of the retarded and to recommend a coordinated and coherent Federal program. The President's Panel on Mental Retardation was appointed in 1961 and it was Eunice, in her role as consultant, who provided the constant spark and encouragement to the panel to complete its work during the brief 11 months allotted to its study. The panel's report in 1962 gave birth to President Kennedy's far-reaching mental retardation legislation, which he signed into law in 1963.

And my brother, Senator Edward Kennedy, was successful in putting through legislation to extend and improve the basic Federal grant legislation in the area of mental retardation. This legislation provided over 300 million Federal dollars in block grants to the states for services and facilities for the retarded, and 110 million for both construction and operating costs of university-affiliated facilities.

Equally important, through the annual Special Olympics Program, the Kennedy Foundation has helped to give each of hundreds of thousands of retarded children a dream to grow on — a chance to participate in the tough competition of athletics and physical exercise, to run a race, to win a prize, to learn to believe in himself.

We all know the very real meaning our efforts have in human terms for the handicapped citizens everywhere in the Nation. The meaning was brought home especially poignantly to me when I heard the statement of the father of a profoundly retarded child — but a child whose condition had vastly improved through the sort of specialized training now available through physical education and recreation professionals. There can be no more eloquent tribute to the success of dedicated work than the words the father used in telling of his child's improvement: "In a short period of time, our child has developed to the point where he is qualified to enter a special private school and is a more functional member of the family. I think that this little child represents the light that President Kennedy spoke of, lighting the darkness with a candle, because this child is living evidence of that light, coming from a non-functional human being to what he is today and continuing to develop."

In closing — perhaps more than all others, it is the physical educators working with the handicapped who are lighting the candle that President Kennedy spoke of. Again, I regret that my sister could not be with you for this most important conference that is truly a milestone in physical education and recreation for the handicapped. When asking me to be here today, my sister said: "This conference could well be the most important conference ever held in the State of New York concerning the handicapped."

Thank you.

"MILES TO GO BEFORE WE SLEEP . . ."

Glen C. Randall

Executive Director, Special Olympics
The Joseph P. Kennedy, Jr., Foundation

Dr. Phillips, Dr. Soucy, Dr. Koch, honored guests, friends of the handicapped in New York:

I regret that Eunice Kennedy Shriver could not be here with us this evening. I was happy to accept her invitation to speak because I know that for the past several months she had planned to participate in this most significant and first New York Statewide conference on physical education and recreation for the handicapped. The Kennedys and the Shrivers have always loved sports, physical fitness, touch football, swimming, skiing, and *running*. Right now, Sarge and Eunice are competing in a long distance race — a marathon that has 6 more weeks to go!

For a long time, the Kennedy Foundation has had a dream that every retarded child in America would have the opportunity to participate in fitness — sports and recreation programs. For many years, Eunice Kennedy Shriver has conducted summer camps at her home in Maryland. At the Foundation, we have tested, trained, and encouraged youngsters and teachers alike to participate in fitness programs. We have knocked on the doors of city halls, schools, colleges, and institutions, encouraging them to start physical education and recreation programs for mentally handicapped children and youth.

I am absolutely delighted to be here this evening and to find so many people like you, here in New York, who share that same dream for New York's handicapped. It is a warm feeling to be among so many friends. Physical education and recreation for the handicapped has come a long way in New York during the past few years. Five years ago, most people thought that the mentally handicapped could not even run a race. Today, because of the dedicated efforts of people like you, over 300,000 retarded children in this country are running, jumping, and swimming their way to victory and showing determination, dedication, and sportsmanship that would do credit to any Olympic athlete. This evening, I would like to tell you about a very special program for the handicapped where you can help.

The growth of Special Olympics in 4 short years has been phenomenal. This past summer, over 2,000 Special Olympics games were staged in communities from Fairbanks to Honolulu, from San Diego to Portland, Maine. Fifty states, the District of Columbia, Canada, France, and Puerto Rico sent teams this year to the National Special Olympics at U.C.L.A. Three American cities sent special delegations to U.C.L.A. and have announced their intention of bidding to act as hosts to the 1976 National Special Olympics. I am happy to tell you that one of the strongest bids will come from here in the State of New York.

Thousands of news articles and pictures have appeared in newspapers across this land, lauding the mentally handicapped for their inspiring performances. This is important, but the most important outcomes are not always visible. They take place in the mind of a child who suddenly experiences the taste of success — a new and exhilarating feeling for one whose normal experience has been failure. A young Texas lad won the mile run in 4 minutes and 54 seconds — an impressive time for any young boy. When he crossed the finish line, he fell into his coach's arms and said "Hey, I told you I could do it!" And I said to myself, "*That* is what Special Olympics is all about."

In the past, there have been some magnificent performances at the national games — many of them by New York children. In 1970, a boy from Fairport, Gib Craig, set two national records in swimming that still stand. And Rose Singleton set a national record in the high jump. A boy from Richmond, Virginia has thrown the softball over 289 feet — almost the length of a football field. And then, you take Angie, who ran in one of the lower divisions of the 300-yard run. I use the word "ran" loosely. You could tell right away that Angie was no runner. Angie is one of those multiple-handicapped — an obvious glandular case, her torso heavy with fat — and it took her several seconds just to clear the starting blocks. She peered down the track in dismay from behind her myopic spectacles. The field was in the homestretch before Angie was properly underway. She lost the race by 200 yards, you might say. On the other hand, she stopped several times in some bewilderment at finding herself all alone and at holding up the race behind her. But from the stands, from her fellow competitors who had already finished, from her friends, came cheers, shouts of encouragement, handclapping; and Angie would start up again. About 20 yards from the finish, she got this expression of pure joy on her face as she strained and concentrated and actually *sprinted* across the finish line where she collapsed happily in the waiting arms of her friends, with a wide smile of accomplishment.

That's what the Special Olympics are all about. There are stories of the time a winning runner knew a companion had tripped and fell; and he circled back to help his pal to his feet, costing himself the gold medal. You hear that, and your mind flashes back to an auto race where a driver sped past the burning car that had his brother in it. Ask yourself, who is retarded?

There was a boy from Chicago who ran on crutches. A girl who long-jumped on an artificial leg. There was the blind boy who followed the voice of his coach around the track. There was the basketball game without a single intentional foul. The score was incidental. There was the boy who finished the race and then kept running round and round the track because it felt so good.

There are over 6,000,000 of these enchanted creatures among us. More civilized societies used to treat them with grave deference and respect. Ours used to chain them in one wing of the attic and keep them hidden.

Never mind that Elree Bivens ran the mile in 4:48:2. Know the joy of the great ex-Dodger pitcher, Carl Erskine, who once struck out 15 Yankees in a World Series game, but who knew no thrill better than the day his little Jimmy first put his hand to his ears when the starter's gun went off, then finally took off — and though he finished last, he finished. Erskine wept and said, "There is no way to describe the satisfaction of seeing Jimmy just finish the race."

As Eunice Kennedy Shriver, whose older sister has been special for nearly a half-century, told the lovely boys and girls at U.C.L.A. this summer: "The athletes we remember . . . are not the flawless, but the great human beings who have reached beyond themselves to achieve some glorious goal." Matched on that yardstick, normal athletes at future Olympic Games have a lot to live up to.

Special Olympics is a program for all retarded children — not just the best athletes. I was delighted to learn that trainable retarded children comprise 50% of the competitors at the South Carolina State Meet and even 64% at the Oklahoma meet. To me, severely retarded youngsters in Division 4 are perhaps even more important than our best performers in Division 1. If a blind boy in Glendale, California can run the 50-yard dash by following his coach's voice, and if a young lad in Chicago could run his race on crutches, then surely no child need be excluded.

Special Olympics seems to do something for everyone it touches — not just the children, but also the parents, the teachers, the coaches, the officials, the volunteers — for all of us. In 4 short years, it has given us a lifetime of memories.

This summer, I still can see visions of a swimming pool in Santa Monica. Everyone is on his feet cheering the little girl who is struggling — not to win, but just to reach the end of the pool. And when, minutes later, she finally touches the end, the stands roar with applause.

French and Hawaiian retarded youngsters went to dinner together in Chicago and dispensed with the translators provided for them, because they could communicate better among themselves.

A year ago, a little 12-year-old girl rode in an open convertible through a California town. The town council had declared a day in her honor because she won two gold medals at the National Special Olympics — in Division 3.

In a recent letter from the staff psychologist of a Pennsylvania institution, the comment was made, "You might be interested to know that our two medal winners were so motivated by their success, we have been able to move them out of our half-way house into more independent living, and also enroll them in more formalized training. The prognosis for eventual independent community living is very favorable."

Isn't *this* what Special Education is all about?

You can take pride in the fact that New York has been a real pioneer in Special Olympics. In 1969, with only 2-months' notice, you sent 80 athletes to Boston for the first regional games. This year at Syracuse University, you held one of the biggest state meets in the country — and instructional clinics were introduced and they were super! Over 1,000 athletes were brought together over a 3-day period — providing two nights' stay for the children. At the national games this past summer at U.C.L.A., you had 100 children and 33 chaperones, and every one was a credit to this great State — both on and off the field. At that meet, you did well: 10 gold medals, 12 silver, and 12 bronze. Your team led all the states in gymnastics.

New York has shown the way — and I congratulate the work of individuals and groups like Ann Halstead, Dorothy Buehring, the New York Jaycees, the Association of Teachers of the Handicapped, Syracuse University, and many, many more for providing the leadership that has brought the program so far in such a brief period of time. A strong foundation has been built! About 30,000-40,000 people will participate in Special Olympics in New York this year. This is tremendous! In your State, there are 30 area programs and 400 local clubs with a membership of 30,000 — and more than 20,000 volunteers are helping. I think these numbers will increase. Not until every community has its own training program and its own meet will there be the necessary opportunities for all handicapped children to be trained and to compete.

Special Olympics is a house that was built from the roof down. We started with a national meet in 1968. Now, after 4 years, we have made a good beginning on the foundation, the real "heart and soul" of Special Olympics — the local and community based programs. Over 2,000 were in operation this year. Our goal for 1973 is 3,000 — and they will be organized and run by people just like you, people who are already giving 100% to the handicapped but somehow, someway, find time to do even more, because they know what this program can do for their children.

You are the most important people in the whole system, and it will stand or fall on what *you* do. Despite all the glamour and publicity of state and national games, the real story of Special Olympics happens in your classroom, on your playfield, in your backyard. *Special Olympics is you and a child* — working to improve, working to achieve — every day. This whole program was built on this philosophy — a concern for daily physical activity for *all* the children.

What do you need to establish a good local Special Olympics Program? I believe that there are five basic needs, all of which can be met by every community in New York. Let me briefly go over the key points where your area director will help.

- First of all, one local agency must accept responsibility for initiating, promoting, and coordinating the program. The most obvious candidates are the school system, the recreation department, a parent organization, or a service club.

- Secondly, a local Special Olympics Committee must be established. It should have representation from all the local agencies concerned with the retarded, as well as from the fields of physical education, recreation, and medicine. Each member should have responsibility for a specific aspect of the program and collectively, they should provide the power that makes sure that things do happen.

- The third thing, of course, that you need is a site for your games. This does not have to be a 30,000-seat stadium. Your basic needs are simply a track, a playfield, and a pool. These are facilities that are found at many high schools and almost all colleges.

- Fourth, you need to recruit a group of professional people in physical education or athletics to serve as active advisors to the program. This is extremely important. Their major responsibility will be to see that your meet is staged in a competent, professional manner and according to the rules and regulations established for Special Olympics competition. We would also hope that they would give guidance and direction to the training programs for the children.

- Your fifth need is volunteer manpower to help both at the meet and in the training programs. Surprisingly enough, this seems to be the need that is the most easily met. Over 125,000 volunteers worked in Special Olympics this past year — 20,000 in New York alone. They came from service clubs, youth groups, women's clubs, high school and college teams, fraternal organizations, parent groups, and a hundred other sources. They served as coaches at after school and Saturday morning training sessions, and at the meets themselves. They served as guides, officials, parade marshals, runners, accomplishing the wide variety of jobs associated with putting on Special Olympics games.

These, then, are the five basic ingredients of a local Special Olympics program: a local sponsoring agency, a Special Olympics Committee, a games site, an active professional advisory group in physical education, and volunteer manpower. With these five basic needs met, your local meet could become the single most important annual event to happen for the retarded children in your community. It could become their way of proving to the community and to themselves that they can accomplish, that they can succeed — and success will breed success.

Now, next Wednesday morning when you are back home and you start making telephone calls to get this organization started, a lot of people are going to tell you why it cannot be done — despite the fact that it has already been done in over 2,000 American communities. Probably, the first reason they will give you is that no money is available. The best answer to this is to point out that the average cost for staging those 2,000 local games was less than $50. Probably the major cost is awards; and if you will write to your State Director, Miss Ann Halstead, she will be able to tell you how to obtain official Special Olympics Award ribbons for your place winners.

The next thing they will say is that your children are not ready for this type of competition and strenuous physical activity. You can point out that this is exactly why you want to start an athletic training program for them and to get the help of local sports experts. Through your State Director of Special Olympics, the Kennedy Foundation will provide you with the training materials and guidance in setting up your program. Perhaps your children are not ready right now, but certainly they can be ready 6 months from now.

Then they will probably ask you how we know that this type of program is really good for retarded children. Many people are skeptical about competitive athletics for young children. One answer to this is the fact that Special Olympics has been endorsed by every major national agency concerned with mental retardation, physical education, or recreation. Fifty governors have issued proclamations of cooperation and support. Twenty states have set up commissions or agencies to see that the program is implemented year round. Seventy-five university physical education or special education departments are involved in some aspect of Special Olympics.

In 1969, Dr. Milton Brawer, a sociologist at Western Michigan University, interviewed 228 competitors at the Michigan Special Olympics, immediately following their event. His goal was to find out, first of all, what the children really thought about Special Olympics, and secondly, to uncover any evidence of emotional problems resulting from the highly competitive conditions at the meet. The findings of his research are most revealing: 99% of the children unequivocally said that they thought the Olympics were a good thing and that they would like to do it again. When asked what they liked least, two-thirds said that there was nothing that they did not like. They did not and would not give a negative statement or identification, even when the interviewers rephrased the question and did their best to obtain an answer. The following are Dr. Brawer's comments regarding the emotional factor:

> Although one-third of the children did indicate some degree of losing, the consensus among the interviewers was that the children were admitting their fears in an open, rational, and controlled manner. In a sense, the admission of fear seemed to be a victory over fear. There was no relationship at all apparent between the admission of fear and any behavioral indication of despondency. For example, the researchers watched for signs of emotional upset. We expected some of the kids who lost to cry or appear downhearted. Virtually no such behaviors were observed. The children were usually breathless, but they were pleased and happy.

Dr. Brawer also questioned the teachers and volunteers about the success of their local training programs. Over 90% said that they had no real difficulty in interesting the children. Perhaps the most significant responses related to the effects of Special Olympics were these: When asked to indicate any changes in the children, not one teacher indicated any deterioration, and 90% responded that they saw direct improvement as a result of their participation. In conclusion, Dr. Brawer states:

> The kids were enthusiastically involved in the entire program. Fears and anxieties were relatively scarce. When they did occur, they were rational fears and in no way seemed to produce neurotic reactions. The Michigan Special Olympics was a great success. There is no question about this conclusion. The kids told us so.

In closing, I would like to share with you some comments about Special Olympics from a professor of pediatrics who is the director of a retardation center here in New York at a medical college. The New York State meet at Rochester was her first contact with the program.

> As you know, I have worked with retarded children and their parents all of my professional career; my outward emotions are well-controlled, no matter my feelings. However, seeing a boy run with the wand of fire to light the eternal flame, his eyes sparkling, his face aglow, a human being on an important mission, was perhaps one of the most stirring sights I have seen. The faces of all the children shone with the inner happiness that comes from accomplishment. One of the little girls to whom I presented a gold medal bubbled over with joy, and stood there on the podium enthusiastically applauding herself. It was a beautiful sight.
>
> The children who participated in the Special Olympics were helped to make a rare discovery in themselves. I like to think it opened a heretofore closed door inside them, and that each child was able to feel a precious sense of achievement.

That is what Special Olympics is all about.

We have come a long way, New York – but we have "miles to go before we sleep." Together we can reach out and provide these opportunities for all your children, and the sense of pride and accomplishment that they carry from the playfield can be the spirit and motivation for a new beginning – a new life for the handicapped.

NEW DIMENSIONS IN PHYSICAL EDUCATION FOR THE HANDICAPPED

Leo A. Soucy

Assistant Commissioner for School Services
New York State Education Department

I am deeply honored to be here tonight and to bring you the greetings of the State Education Department and the Board of Regents. It is indeed my personal pleasure to participate in this First Statewide Conference on PHYSICAL EDUCATION FOR HANDICAPPED CHILDREN AND YOUTH.

A "first" is a singular achievement in any undertaking. Thus, as educators and lay persons concerned with the physical fitness of children and youth — and more specifically with that of *handicapped* children and youth, as we now turn a Statewide focus on their special needs in this extremely important area — we recognize the significance of this conference.

In spotlighting physical education for the handicapped as the theme for this first Statewide conference, there have been some noteworthy forward strides in education in our State. The planning of the conference, in and of itself, has brought together three units within the Department — the Division for Handicapped Children; the Division of Health, Physical Education, and Recreation; and the Division of School Supervision. Under shared sponsorship, it has further involved the staff in the School of Health, Physical Education, and Recreation at this very fine institution, Ithaca College, whom we are proud to have as hosts for this first conference. In attempting to reach its objectives, it has enlisted the support of the Nation's best — highly qualified professionals in the field of physical education for the handicapped, with whom you will be examining specific techniques and programs designed to accomplish these ends.

As the conference now opens, it also brings together from all over the State the experience, wisdom, imagination, and deep concern of both professional and lay people. By your very presence here this evening, you become advocates of a Statewide program in physical education for the handicapped — one that fits the individual needs of these children and youth — and one that is adapted to their particular problems. To sum up all of these achievements, the significance of this unique conference is that it brings to the attention of the public the *right of the handicapped child to physical education* — to the kind of program that ensures that he will no longer be a mere spectator, but *an active participant* who feels the same thrill of accomplishment as any other child. It is assuredly a conference which can be of great importance to the future of education in the Empire State. The findings and recommendations which emerge from your deliberations during the next 2 days can hasten the advance of meaningful physical education programs within our schools, thereby contributing greatly to general education in the State and benefiting the Nation as a whole.

For the opportunity provided by this conference to consider the needs and problems of handicapped children and youth in our State with regard to physical education, we are grateful to the joint planning committee and other staff members involved here at Ithaca College and in the State Education Department in Albany. On behalf of the Department, the teachers, the administrators, and the other educational workers in our State, I want to express a special word of appreciation and congratulations to the committee, and to those able staff members for the splendid work that they have done in planning and organizing the conference program. I also want to assure them of the continued support and cooperation of the Department in carrying out the purposes of this conference to the fullest measure possible.

To direct your attention to the needs and problems of the handicapped in physical education, a number of curricular options have been gathered by the committee to be placed before you for observation and study through demonstrations, lectures, and discussions. It has been said that "Effective education is geared to the life and culture of the people, and that life and culture are ever changing." It is obvious, therefore, that educators must always be reexamining the educational system, in whole or in part — as this conference attempts to do — in terms of the needs which these ever changing patterns of life and culture bring.

Our society today is characterized by space exploration; the explosion of knowledge; urbanization and suburbanization; automation and mechanization; an atmosphere of conflict and war; and an attitude of distrust, uncertainty, and apprehension. Yet, on the other hand, there is increasingly more freedom from drudgery and economic stress, more time for recreational and cultural pleasures, and more opportunities to travel and enjoy life. We also find that knowledge, facilities, and opportunities for healthful physical activity are more plentiful. With these advances, handicapped members of our society can not only survive, but can actually perform without help many of the tasks required for daily living. In such times, our challenge is to find ways in which to maintain the strength, endurance, zest, and vitality of the people. This has tremendous implications for physical education.

Generally speaking, we believe in New York State that physical education, as an integral part of general education, must play its part in helping each individual human being to achieve the best of which he is capable. We are concerned with physical fitness — fitness for the life one lives, plus a reserve for emergencies. We are concerned about the wholesome use of leisure time, and we believe that physical education has an important function in preparing for this. We believe that there are no greater opportunities than those in physical education for learning emotional control, good sportsmanship, respect for personality, and a genuine recognition of and respect for individual differences. We believe that the values and satisfactions inherent in physical education are so profound that they should be available to all children and youth — in fact, to all people, of all ages, in all parts of our State.

You will note that I have not stated that we have achieved these purposes — only that we believe in them and that we are working towards them. Whether we achieve them or not depends on many things: on our teachers and administrators, and the goals they individually hold for physical education; on community understanding and support; on the students themselves; and on the interests of the home and family.

But a purpose is not inspiring if it represents present achievement only; it must give us something for which to strive. And so, as we see more of these purposes being achieved in some places, and fewer in others, the challenge becomes clearer. We must redouble our efforts, through physical education, to develop physically fit, skilled, and happy human beings. Physical education and its outcomes must be for all — the handicapped and the non-handicapped. We are fortunate in New York State in having schools — public, private, residential, and parochial — for most of our handicapped children; and so we can hope to reach most of our children and youth with our programs.

As we envision physical education in the 70's, there will be a continuing need for dynamic action to provide opportunities for adaptive physical education in every school district. Normalization? True integration? Belonging? These youngsters want and need to belong. Will this be part of such action? Generally speaking, traditional approaches will be abandoned for new, innovative techniques in programing for the handicapped. Each student will be considered on the basis of his special needs: his background, skills, abilities, and experience will receive prime consideration. The thrust will be to integrate the handicapped into regular physical education classes and groups whenever meaningful and feasible, while maintaining placement flexibility so that these students can also be separated for other physical activities depending upon their needs and capabilities.

These newer dimensions in physical education for the handicapped have challenged the colleges and universities across the Nation, bringing changing patterns of professional preparation and service in this field. They began to surface at the beginning of this decade; and it now becomes imperative that the institutions of higher education within our State continue to be responsive to the needs of both physical educators and special educators, and that a renewed effort be focused on identifying the tasks of teachers and administrators in both urban and sparsely populated areas of the State in order to relate these tasks to the competencies of professional personnel and to the improvement of preservice and inservice training. Obviously, such objectives cannot be achieved by many colleges and universities if they rely on campus resources alone. Some departments of physical education may have access to resource centers and demonstration classes, but usually local school districts provide the population for practicum experiences. Hopefully, the districts will increasingly involve students and college faculty for training purposes in such backup resources as special education instructional materials centers, educational materials centers, and other resource centers of this type. An encouraging trend is the continuing increase in associate SEIMC's that are cooperatively funded by the State Education Department and cosponsoring local educational agencies such as the colleges, the local districts, and the boards of cooperative educational services. The integration of staff members from these various funding agencies is a healthy development, since service and training are blended into one operation. The preparation of teachers is a task best shared by those in the field and those who serve as teacher educators. It is my contention that neither can do the job alone. Like many tasks in education, it demands a *cooperative effort* — for only then does the resultant action bring benefits to the special children whom we choose to serve.

These newer dimensions in physical education for the handicapped, briefly mentioned in part, become the challenge of tomorrow. I have spoken of the need for *a cooperative effort* in coping with the tasks that lie ahead. In so doing, I am not unmindful that the kind of dynamic interaction at the grass roots level that this implies, calls for the highest commitment on the part of all concerned with the needs of handicapped children. Most encouraging to you who are here this evening, I am sure, will be the knowledge that the *education of handicapped children* is being given high public visibility by Commissioner Ewald B. Nyquist and the Board of Regents. In fact, the Board of Regents has charged the Department with the responsibility of developing "a broad-based State and local program to provide equality of educational opportunity to all handicapped children."[1]

This is an awesome mission. The reality of this State commitment is only attainable if the individual school districts and communities reaffirm such a commitment and it results in an activity jointly planned by State and local educational agencies in combination with the Federal government. Early progress across the State indicates a marked advance toward this significant goal. Never before has there been such a positive and accepting climate throughout our State.

The future, therefore, holds a great promise for physical educators and special educators — in fact, for all concerned with the physical fitness of the handicapped. It is a time in which, cooperatively, you will be able to develop effective physical education programs more easily for the handicapped at the local level; a time in which you will be assisted by an enlightened and supportive public; a time in which you will be assured of Federal and State financial assistance; and a time in which you will be able to avail yourselves of an array of improved, strengthened, and coordinated services, expanded professional preparation programs for teachers and leadership personnel, and opportunities for research activities.

These are some of my predictions. The outlook is hopeful — particularly in the face of a growing national commitment to provide full educational services, of which physical education is an integral part, to all handicapped children and youth. The ideal is clear, the directions well marked. Now further steps must be taken following this history-making conference so that all handicapped children and youth can move ahead toward the fullest realization of human potential. Helping, as you are, to assure the intrinsic right of thes children to physical education — to education per se in the State of New York — is a noble work. To the end that — working together — we may accomplish our goal, I pledge to you my cooperation and support, and that of the State Education Department.

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[1] Regents Program Priority Statement for Fiscal Year 1973-74; "Priority Problem Areas Concerned with Student Outcomes"; *Education of the Handicapped.*

A COMPREHENSIVE PHYSICAL EDUCATION PROGRAM FOR THE SEVERELY PHYSICALLY HANDICAPPED

(A Project Made Available Through ESEA, Title III)

James DeBell

Director of Health and Physical Education
Jefferson High School
Rochester, New York

There are at Jefferson High School in Rochester, New York, 48 pupils who are severely physically handicapped. This thesis will be devoted to the manner in which physical education may be adapted to meet more adequately the physical and mental needs of these children and hopefully to induce other school districts to incorporate similar programs.

"The handicapped child consciously, or otherwise, seeks help in minimizing or overcoming his disability as well as acquiring a general education. The school should strive earnestly and effectively to aid the pupil in accomplishing these goals. In doing so it must be recognized, for instance, that the general program of physical education is designed for pupils who have no restrictions placed on their activity. Taking cognizance of this fact, two courses of action commonly have been pursued with handicapped pupils. The first has been to excuse the child, and the second has been to place him in a 'corrective program.' Neither course of action has been found adequate in terms of the child's total needs or the potentialities of the school for meeting these needs."[1]

Our desire at Jefferson was to provide an adequate physical education program adapted to the limitations of the youngsters. We were not concerned with providing a physiotherapy program, although secondary outcomes might include physical improvement, but rather an actual adapted physical education course of instruction which would be pleasant, enjoyable, and active within the limits of their handicaps.

The aim of the program was the same as that of regular physical education. "In adapted physical education, the effort is made to help the student take his place in the social and economic world as a citizen who is respected for his general qualities and capabilities. He is given an opportunity for the fullest development of his physical, social, and economic potentialities in an environment that is friendly and informal. In this developmental experience he is guided by understanding teachers. Under these conditions he learns how he can earn his place as a member of a social group, not trading on his disability, but utilizing his abilities.

"All pupils, regardless of the disability, should have an opportunity to participate in social recreation situations. It is believed that if a pupil can come to school, there is some mild form of activity in which he can safely engage.[2]

"The aim of an adapted program is to provide through competent leadership, a diversified program of developmental activities, games, sports, and rhythms suited to interests, capacities, and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in the vigorous activities of the general physical education program."[3]

Based on the foregoing, the following objectives are listed:

1. *To provide a pleasant, enjoyable, and as physically active a program as possible within the limits of the students' handicaps.* There are many activities — some mild, some active — in which the student can engage. Fortunately, the activities offered have carry-over value — once learned, the pupil can use them in later life.

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[1] Arthur S. Daniels, "Physical Education and Exceptional Children," *Adapted Physical Education* (New York: Harper and Brothers, 1954), pp. 8-9.

[2] *Ibid.*, p. 81.

[3] *Ibid.*, p. 82.

Evaluation — The curriculum provided an active program. A variety of activities was made available which included physical training using many different types of equipment for strength development, recreational games of all kinds, and several more active type activities. (See listing on p. 33.)

2. *To develop to the fullest, and this may be very limited, the physical capacity of the youngster by having him engage in adapted physical education.* "The newer trend in many schools is away from the correction of the physical defect by formal exercises and toward the provision of the advantages and opportunities available through games and sports activities properly supervised and adapted to the needs of the typical student. This newer trend takes the physically handicapped individual as he is with respect for what he may become, helps him to help himself, and contributes to the better health and efficiency of the total individual."[4]

   Evaluation — The youngsters have demonstrated an improvement in range of motion and physical strength in a limited capacity. The hope for actual improvement in condition is somewhat guarded; however, retention of status quo rather than further loss is an objective well within reach and has been maintained.

3. *To promote good mental attitudes and an outlet for surplus energies.* "Play with its emotional uplift, is as necessary as work and leisure for the individual."[5] "The principles involved in recreational therapy for the mentally ill may well be used as a preventive for many of the so-called normal individuals whose drives and desires have not been adequately expressed."[6] The handicapped child has the need to belong, to achieve success in an endeavor as does the normal child. "The psychiatrist and the psychologist recognize sports and games as ideal outlets for the expression of the fundamental drives, desires, and urges, which are often thwarted and unexpressed. Play is a necessity for relief from the monotony and strain of work. The child's usual activity is not sufficient to absorb his available energy."[7]

   Evaluation — The mental attitude is something that is difficult to ascertain. However, a critical look at the youngsters from the beginning of the year to the present time will indicate a marked improvement in their outlooks on life and their surroundings. Their cheerful, pleasant attitudes belie the problems that beset these children daily.

4. *To provide a complete program so that no child would be exempt from physical education.* The program should be set up to include all types of activities. It should be adapted and made simple in execution so all ambulatory cases may participate. Social and quiet games (i.e., chess, cards, etc.) should be included so that heart cases will not be eliminated.

   Evaluation — At the present time all 48 children have been scheduled to take gym at least three times per week. Many are involved five times in the gym program. The activities guarantee something in which every child can participate regardless of disability. Ambulatory cases, heart problems, and even youngsters carrying catheters are engaging in some form of activity.

5. *To provide activities for fun.* The adapted physical education program should be instructional; however, many activities should be included which are played for enjoyment and for the social values derived.

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[4] George T. Stafford, *Sports for the Handicapped* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1947), pp. 6-7.
[5] *Ibid.*, pp. 12-13.
[6] *Ibid.*, pp. 36-37.
[7] *Ibid.*, p. 36.

Evaluation — Skills are taught, attention is given to muscle tone, but the primary concern in the activities provided is the atmosphere of fun. The meeting of all objectives is handled with the philosophy that improvement of instruction is done with the fun vehicle.

6. *To create an atmosphere which will reveal to the student his strengths and not his weaknesses.* "A program of adapted physical education which will help the individual increase his strength, range of movement, improve coordination and endurance, is rendering an invaluable service. If walking is improved, stair climbing becomes less of a problem, and the hundreds of daily acts are accomplished with less fatigue and with greater efficiency, and the handicapped person experiences a vastly improved total living situation. He becomes less dependent and feels more secure in his ability to meet his own needs. An individual program of carefully designed developmental exercises, rhythms, games, and sports can contribute a great deal toward improving total function."[8]

   Evaluation — Attention is given exclusively to what the child can do. Emphasis is provided to activities that the youngster can do with success, and what he cannot do is ignored. Areas in the school are utilized in allowing the child to be successful in mastering daily acts of stair climbing, independent motion and movement, and becoming more secure in his ability to meet his everyday needs.

7. *To provide activities as similar to those of the regular program within an adapted philosophy.* The items included in the orthopedic block were set up as much as feasible to complement those in the regular physical education block program. For example, when the pupils are engaging in soccer during the soccer season, the people in the orthopedic program will also be in soccer activities. A similar system is used in basketball, apparatus, weight training, track, etc. The activity may be of a recreational game type as well as group mass play.

   Evaluation — The provision is made whereby the student engages in programs similar to those of the regular students' activities. This enables the handicapped child to feel that he is a part of the school community, so less stigma is attached to his condition. He is made to feel as normal as possible.

8. *To provide an atmosphere for learning rules, philosophy, safety procedures, and health habits by encouraging physical growth to their optimal level.* The pupil will learn to play within the spirit of the rules of the game in which he is engaging. He must learn to handle his handicap safely while participating in various types of activities. Opportunities will arise which will enable the teacher to use the technique of incidental health teaching in regard to physical conditioning, ways to improve endurance, etc.

   Evaluation — Rules, philosophy of games, safety procedures, and health habits were uppermost in the minds of participants and teachers so discipline is maintained and growth in spirit is achieved. Many games are from foreign lands, so some cultural training is gathered in an incidental way. Teachers find opportunity to provide health training habits as the games progress.

9. *To promote good student-teacher rapport.* "Rapport involves more than mere cooperation with the participants and requires that the teacher consistently look for ways in which he can make the handicapped person feel more at ease and comfortable. An outgoing role must be played by the teacher because the handicapped person is not apt to take the lead in developing active participation in activities. This kind and persuasive

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[8] Daniels, p. 87.

manner should have no element of force in it. Patience is the byword of the teacher's technique. Time and time again the handicapped person may not respond. Persistent efforts should be made by the teacher in order to secure the proper reactions from specific individuals."[9]

"The teacher should know all about the student — his disability, his attitude toward it, his attitudes toward life in general, his hopes and fears. Only under these conditions is the teacher in a real position to help. The willingness to help must be fortified by the knowledge of how to help. Due to varying needs and abilities of pupils, the teacher must be able to exercise flexibility in carrying out the established program."[10]

Evaluation — Because of the close proximity of teacher and pupil, in some cases a 1 to 1 ratio, teacher-pupil rapport is excellent. The teachers actively engage in games with pupils. Flexibility, patience, and gentle persuasiveness are used as techniques to achieve the established desired outcomes of each individual class.

10. *To evaluate and grade the progress of pupils in order to keep the parents abreast of their status.*

    Evaluation — Constant communication is maintained with the home and Jefferson's central orthopedic office to keep parents currently informed of their child's progress. A reevaluation of program, equipment, and physical condition is always under scrutiny.

11. *To provide the beginning of a happy, satisfying and worthwhile life in the present and future for this group.* "An orthopedic program may be the only means available for the handicapped person to narrow the gap which exists between himself and others he wants so much to be like. Recreational sports and games are invaluable in providing opportunities for satisfying desires basic to all of us. The potentials for belonging, being wanted, and even getting a little recognition lie strongly within the recreational experience. A handicapped person who can become skilled in an activity valued by his group, develops a feeling of adequacy. He acquires a status within the group not previously attained."[11] These outcomes have carryover into the handicapped person's life which will better enable him to meet other obstacles.

    Evaluation — A review of the people who have been graduated from the program and have taken their places in society will reveal a group of happy, independent, useful citizens who have learned to live with their handicaps and have made many worthwhile contributions to the community.

Procedures and Methods

The teacher, understandably, is an important factor in the success of the adapted physical education program. He must be able to translate medical findings into desirable activity experience. He must have at his command an excellent repertoire of the various recreational activities which can be called upon for use in a flexible situation. The teacher must have the desire to give all the time and effort necessary to help the youngsters move toward their goals, overcoming the many difficulties encountered. Even with the best background, personality, and willingness, the teacher must keep several special methods and procedures in mind as insurance for complete success. They are as follows:

1. Verbal directions should be few and simple, but complete. It is undesirable to have too many complex rules and directions to follow. A more direct course would be to adapt the activity simply but within the spirit of the game so the outcome will be apparent to all participants.

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[9] Frederick M. Chapman, "Leadership of Activities," *Recreational Activities for the Handicapped* (New York: The Ronald Press Co., 1960), p. 22.

[10] Daniels, pp. 93-94.

[11] Daniels, pp. 86-87.

2. Teacher participation is an excellent teaching device. This technique manifests itself particularly in the pool. Confidence can be instilled in the youngster if the teacher is with him – guiding, demonstrating, and being in a sense a part of the handicapped person himself.

3. Praise is extremely important in helping the handicapped child feel a sense of improvement. Encouragement in the effort put forth will go a long way in motivating the child. It must be kept in mind that perfection in skills is not a goal in the orthopedic program.

4. The time allotted should be budgeted so a minimum of time is spent in preparation for the activity. Practices should be short to enable the pupils to begin the activity as soon as they are ready. If too much time is spent on practicing, a regression in performance may occur leading to frustration.

5. New activities should be introduced frequently to keep interest and desire at a high level. It is imperative not to let an activity die on its own, but rather stop it while interest is high so that the pupils will want to return to it at a later time. However, wise judgment must be considered here because the handicapped pupils will want to participate in those activities they have mastered and can engage in with reasonable success. Therefore, it would be advantageous to return to a skill perhaps with a varied or different approach for repetition and review. Take several roads to the same destination.

6. There is a definite margin for error and mistakes that will be made. Modification will have to be made and a policy of constant evaluation will have to be in effect. The teacher must have unlimited patience. If an activity does not work, the reasons must be analyzed and the activity modified or perhaps dropped completely and replaced with something else.

7. Each time the handicapped person comes to gym is a new day. One can never be sure what problems or frustrations have burdened the child since the last meeting. His levels and plateaus may be frequent and sudden. Therefore, the teacher must be continually restimulating and remotivating the student.

8. It is desirable to have all children participating in the activity. It must be expected that the youngsters engage in the activities. A child will not be babied but the prodding should be gentle with understanding and compassion for his difficulties.

9. There will be ample opportunity for incidental teaching in the area of health. Cleanliness, diet, rest and sleep, and care of defects and disease are among the topics that should be included.

10. "Instruction must be slow, deliberate, and progressive. Small, sequential, and concrete steps should be followed in presenting material. 'Make haste slowly.'"[12]

11. "Guidance of these individuals in many facets of their lives becomes a major responsibility of the physical education instructor because tremendous rapport is built between child and teacher. Such activities will be both of a formal and informal nature."[13]

12. "Grading and evaluation should be an objective appraisal of the progress each individual has made in the attainment of class objectives. This should be supplemented by a narrative report to the parents of the child's status and progress."[14]

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[12] Julian U. Stein, "Adapted Physical Education for the Educable Mentally Handicapped," *J.O.H.P.E.R.*, December 1962, Vol. 33, No. 9, p.51.

[13] *Ibid.*

[14] *Ibid.*

Administrative Considerations

In evolving an orthopedic program of this type, several problems of an administrative nature must be taken into consideration and solved, at least to a temporary degree.

1. *Parental approval*. It is understood that parents of ambulatory children are deeply concerned about the types of programs in which their children are engaging. To insure that the program meets with the approval of the parents, a letter should be sent to all concerned before a child is entered.

2. *Class size*. The size of the class will be dependent upon the number of handicapped children in school. It is proposed that the pupil-teacher ratio would be 5:1. In the aquatic program, there will be a 1:1 ratio. The use of student leaders will aid in meeting this requirement.

3. *Periods per week*. Ideally, the class should meet five periods per week. The minimum allotment should be two periods per week.

4. *Length of periods*. The time length should be the same as those of the regular class. There should be some flexibility as the pupils must be wheeled to and from class.

5. *Student leadership*. The use of students is an important aid in the preparation of the children for activities. The regular students can be obtained from study halls so as not to miss any of their school work. They can help in bringing the children to class, dressing and undressing for swimming, removing braces, assisting in the organization of games, and acting as referees and umpires.

There are several outcomes that are desired. After a trial period, the program should be evaluated in the light of setbacks or real progress made with the students. Suffice it to say that more are in the hopeful stage than perhaps will ever become realities. Several of these are as follows:

1. "The student will be better able to cope with his conditions.

2. Greater independence will be achieved by the handicapped individual.

3. The student's desire to get along better with others will be boosted.

4. The student's faculties can improve to enable greater scholastic improvement. This involves alternating periods of stress and relaxation.

5. The pupil will see his potential and will attempt to develop it."[15]

6. The student will be in experiences for improving physical growth up to his potential.

7. The child will be having some fun leading to a zest for life.

8. The child will experience success which will diminish the possibility of an inferiority complex.

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[15] John R. Schoon, "Some Psychological Factors in Motivating Handicapped Students in Adapted Physical Education," *The Physical Educator*, Vol. 19, No. 4, December 1962, pp. 138-140.

9. The handicapped person will have a sense of belonging.

10. The child will develop a pride in his school.

Progression from Mass Class to an Individual Gym Program

It is the consensus of opinion that the orthopedic gym program is a highly successful operation. Mistakes are made as is expected in selection of activities and materials; however, most of the program is extremely well received by the participating youngsters. Parents are solid in their support; and administrators, faculty, students, and experts in the orthopedic field are most gracious in their support and advice.

Discussions held informally as well as in the form of written evaluations show an overwhelming degree of enthusiasm for continuation of the program. There is also a desire for expanding the time allotment to include a driver education course and some art work to supplement the regular physical education and recreational programs. The youngsters indicated they would like to come to the gym 5 days per week.

Careful analysis of the submitted reports indicates everyone concerned with participation, administration, teaching, or just observing the orthopedic class is sold on its value as a physical conditioner, developer of health attitudes, and provider of fun for all the youngsters.

Interest in athletics is stimulated to a degree that several of the boys have volunteered to serve as managers for junior varsity and varsity teams — proof of their value and worth to their school.

The high ratings received by the program gave credence to the fact that somehow all handicapped children must be given the opportunity to become involved. With the authorizations provided by the Elementary and Secondary Education Act, a means became available for expanding the program by the incorporation of needed equipment and the hiring of additional personnel to insure that every child be scheduled every day of the week. A report was submitted, evaluated, and approved. Plans were formulated and put into operation with the following format:

- The students (one or more) come to the class and are met by a teacher.
- The pupils then change into gym clothes in a private dressing (locker) room area and proceed to the physical therapy room.
- A regular program of physical training (based on recommendations of the school's orthopedic surgeon in consultation with the pupil's personal doctor) is administered. This phase of the class continues for 10 minutes.
- The teacher next provides the core section of the class, which might consist of such activities as participation in a recreational game or instruction in a carry-over sport such as archery, bowling, or swimming.
- The child then returns to the private orthopedic shower room for a refreshing shower, dresses, and returns to his academic classes.

The program was initiated in September 1968 and 48 youngsters with various degrees of disability, both boys and girls, participated. The following items were constantly kept in mind throughout the school year:

1. All children had an opportunity to participate.

2. An active and diversified program was available and utilized.

3. The children had fun in many of the activities.

4. Attention was given to developing physical fitness, learning rules of games and playing within the spirit of these rules, all of which help to promote good mental attitudes.

5. An atmosphere was provided in which the youngsters could discover and develop their strengths.

6. Devices included: simple directions; teacher participation; liberal use of praise and encouragement; progressive steps to insure learning of skills and techniques; and development of excellent teacher-student rapport.

Statement of Need

Education and Cultural Facilities and Resources

The City School District of Rochester includes 43 elementary schools, eight comprehensive high schools, and one technical and industrial high school. In addition, the school system is involved in such programs as a Manpower Development and Training Center and a series of preschool programs supported through the local Community Action Program funded under the Economic Opportunity Act. As a participating member of the Genesee Valley School Development Association, the Rochester city school system is part of a cooperative educational enterprise involving 40 school districts.

Rochester and surrounding towns are the homes of numerous institutions of higher education: University of Rochester, St. John Fisher College, Nazareth College, Roberts Wesleyan College, Colgate Rochester Divinity School, Rochester Institute of Technology, State University Colleges at Brockport and Genesee, and Monroe Community College.

Rochester is most fortunate in having an excellent library system, the Memorial Art Gallery, and the Museum of Arts and Sciences. It is also well known as the home of the Rochester Philharmonic Orchestra and the Eastman School of Music. In addition, the Community Players and the new Theatre East attest to the interest of the residents of Rochester in drama.

There are 101 social agencies in the Rochester area cooperatively joined under a Council of Social Agencies for Rochester and Monroe County.

Rochester has an international reputation as the home of many well known industries which work cooperatively with the local Chamber of Commerce and also as participants in an Industrial Management Council.

In addition, the services of the Monroe County Health Bureau, Day Care Training Center for Handicapped Children in Monroe County, Inc., United Cerebral Palsy Association of Rochester Area, Inc., the Special Education Department and the Pupil Personnel Services Division of the City School District, as well as the services of the Division of Health, Physical Education and Recreation of the New York State Education Department, will be available.

It will be a function of the planning group of this project to coordinate and articulate the many facilities available with the purposes and activities that are described in this application.

Determination of Needs and Priorities

Since one of the primary objectives of public education is to provide each child with educational experiences most appropriate to his needs, interests, and ability, it is essential that a suitable program be offered the child with severe physical handicaps. The City School District has been faced with the problem of providing continuous and appropriate educational opportunities for such children. It has found that the number of such children is limited in any one school. Moreover, it has been demonstrated that severely physically handicapped children may profit from regular classroom experiences, if they are fortunate enough to have an experienced, sympathetic, and understanding teacher who provides a comprehensive program and who has the time and energy to work closely with each child. Unfortunately, for many handicapped children such optimum conditions are not usually available.

A limited physical education program for handicapped children was started at Jefferson High School in 1964 when there were only 20 such pupils enrolled in this school. This program was made possible through the voluntary efforts of the physical education staff. No specialized equipment was available and no staff was assigned to the program. Despite these limitations, the activities attracted the attention of City School District staff as well as staff from Monroe County Public and Parochial Schools.

The operation of physical education classes for the handicapped within the City School District has aroused the interest of some suburban parents to place their children into these classes. As a direct result, the number of pupils seeking this program has doubled

The City School District, recognizing the need for providing special facilities for physically handicapped pupils, has remodeled a large locker room to provide two additional rooms to serve handicapped pupils in the physical education program.

To provide a comprehensive program for this number of pupils, as well as to prepare for an anticipated increase in the number of such pupils, demands the services of full-time staff. This project has grown out of recognition of this need. Further, equipment is required to provide a more comprehensive program.

This project was one of approximately 20 submitted to the Superintendent of Schools for consideration. A review committee of teachers and administrators recommended that it be submitted as one of six projects from the City School District of Rochester. At a later meeting between City School District staff and the coordinator of Title III ESEA in the New York State Education Department, it was decided that this exemplary project be submitted as one of two projects from the City School District of Rochester.

Rationale for Planning Grant as Best Solution To Meet Needs

Since this project is exemplary, this grant is designed to provide a most comprehensive program for the severely handicapped. The cooperation of the local, State, and national agencies has been promised in order to accomplish this project.

A special grant appears to be the most rapid method for the accomplishment of this exemplary project.

Program Emphasis

The severely handicapped student must be given every opportunity to achieve equal rights in the availability of educational opportunities. Experience to date has shown that conflicts in school scheduling, lack of teaching staff, and transportation difficulties have made it extremely difficult to schedule all handicapped students to attend classes in health, physical education, and driver education. This means some handicapped children do not have an opportunity to exercise their usable muscles but are confined to their wheelchairs, braces, or crutches for the entire school day.

This proposal calls for the assignment of three physical education specialists to facilitate the establishment of an exemplary physical education program. This program will be scheduled to insure that every handicapped student has one period of activity daily.

The personnel will supervise physical education and swimming activities and therapy as prescribed by the student's doctor or the school orthopedic specialist. Personnel will also supervise the use of therapy equipment and showers and assist in dressing the handicapped.

The program will include:

Physical Education Activities

1. Swimming
2. Weight training and a regular exercise program that would encompass both isometric and isotonic activities
3. Walking and hiking — both outside or inside on a treadmill
4. Archery
5. Badminton
6. Horseshoes
7. Apparatus — Exer-Genie, rowing machines, bicycle machine, etc.
8. Basketball and other ball skills that can be taught individually
9. Table tennis
10. Tennis
11. Rhythmics
12. Track and field events — all the events that can be practiced for the National Wheelchair Games and the Paraolympics (wheelchair dashes, shot put, javelin, discus, wheelchair slalom, etc.)

Recreational Activities

1. Archery
2. Bowling
3. Table tennis
4. Golf
5. Riflery
6. Dart throwing
7. Horseshoes
8. Shuffleboard
9. Fly casting
10. Pool and billiards
11. Quiet games (chess, checkers, etc.)
12. Arts and crafts
13. Music appreciation and musical games (rhythms)
14. Camping skills and activities
15. Croquet

Driver Education

Driver education will inspire confidence and independence in the physically handicapped youngster and will permit him to take his rightful place in society.

This program will be available to the physically handicapped. When scheduled for driver education, the student will be assigned to two periods per week behind-the-wheel and two periods of theory.

Planning of Program

Planning Participants

1. Education and Local Agency Participation

The chief consultant in health and physical education for the City School District, the Director of Special Education for the City School District, the physical education staff at Jefferson High School, the helping teacher for the physically handicapped at Jefferson High School, the principals of the schools, and Dr. William Howe, the school orthopedic physician, met several times to plan this exemplary program. The supervisor of physical therapists and the school medical director of the Monroe County Health Bureau were also involved. Letters of involvement are incorporated in the assurances as evidence of interest.

2. Participation of Teachers

This project provides for the involvement of teachers and staffs from the cooperating agencies in workshops, evaluation procedures, and critiques.

Description of Planning, Methods, and Procedures

Jefferson High School is the receiving school for the severely physically handicapped. The department head of health and physical education and the project director recognized the need for a good program of physical education and recreation. The director and the assistant director of health and physical education for New York were consulted as well as the consultant for Title III projects in the New York State Education Department.

Review of the literature indicates that few programs of this kind exist throughout the country. No program of this kind exists in the public schools of New York State.

The acting vice principal of Jefferson High School, the department head of health and physical education at Jefferson High School, and the chief consultant for health and physical education, City School District of Rochester, met with county and city health officials to discuss and plan the proposed project.

Facilities, Equipment, and Materials Being Used

Facilities

Jefferson High School facilities

Two gymnasiums — 60'x90' each
Swimming pool — 35'x75'
Two new rooms
Two tennis courts (outdoors)
Two blacktop basketball courts (outdoors)

Equipment and Materials Purchased and Now Being Used

Equipment needed for this project tends to be unique in nature. It is not the type of equipment normally found in or available through the regular physical education program. The following specialized equipment is essential to provide physical education and recreation for severely physically handicapped children:

Platform mates 6'x8'x18"	2
Parallel bars (walker adjustable)	2
Walkerettes — folding	4
Lumex aluminum adjustable canes	6
Handy Standy splint sets	2
Stationary bicycles	2
Stretchaways	35
Losstrand crutches (adjustable aluminum)	6
Adjustable canes	6
Standard wooden crutches	6
Book carriers for wheelchairs	35
Archery mats	4
Easels to hold archery mats	4
Archery target faces 48"	24
Archery gloves	12
Aluminum ground quivers	6
Archery arm guards	12
Target arrows 24"	1 gross
Target arrows 26"	½ gross
Archery bows 20 lb.	12
25 lb.	6
30 lb.	2
Archery backstop net (10'Hix20')	1
Dart boards	2
Rocket darts (suction cup)	2 sets
Combination dart sets (baseball and dart games)	2 sets
Indoor rubber horseshoes	2 sets
Deck tennis rings	4
Rubber quoit sets	2
Safe-T-Way bowling (plastic)	2 sets
Candlepin bowling	1 set
Mats (folding type) 4'x5'	10
Rubber chest exercisers	12
Folding table tennis table	1
Table tennis paddles	8
Table tennis net	1
Table tennis brackets for net	1 pair
Table tennis balls	1 dozen
Croquet sets	1
Game room shuffleboard sets	2
Billiard table	1
Isometric-Isotonic Trainer (multiple purpose and use) four stations	1
Art and handicraft materials	
Chess, checkers, Monopoly games	
Roll-out tetherball set	1
Weight training equipment	
Record player	
Records	
Movie camera 8mm and projector	
8mm film	10 rolls
Swimming safety belts	
Oyer lift	
Rowing machine	
Chest pulley weights	
Portable ramp for swimming pool	
Equipment to be recommended by M.D.	

Conclusion

It was felt that, in retrospect, the following outcomes have been achieved:

1. Students were better able to cope with their handicaps.
2. Students achieved greater independence.
3. Students indicated a keen desire to improve their skills and physical development.
4. Students had fun in many activities.
5. Students developed a pride in succeeding in athletics.
6. Students had a sense of belonging.
7. Students developed more strength.
8. Students developed an interest in athletics; several boys volunteered to serve as managers for the varsity teams.

ADAPTED PHYSICAL EDUCATION PROGRAM FOR ORTHOPEDIC STUDENTS

	Physical Education	Swimming		
	Registration	September 4		
	Orientation	9		
			SKILLS	GAMES AND STUNTS
Sept. 16-30	Archery, dart throwing, mild hiking	Sept. 16	Breath holding.........	Counting fingers underwater
BLOCK	" " " " "	23	Prone float	Floating for time
I	" " " " "	30	Back float	Jellyfish, prone & back
Oct. 7-21	Adapted soccer, horseshoes, walking	Oct. 7	Push off, kick, glide..	Front glide for distance
BLOCK	Goal ball, horseshoes, walking	14	Change direction	Chain swimming
II	Line soccer, horseshoes, walking	21	Turning over	Front somersault
	Wheelchair soccer, horseshoes, walking			
Oct. 28-	Basketball activities, quiet social games	28	Porpoising	Porpoising race
Nov. 18	Skills, passing, shooting movement, checkers, chess	Nov. 4	Treading water	Treading water for time
BLOCK	Free throws, card games	11	Sculling	Sculling, head first, feet first
III	Adapted wheelchair basketball, guessing games	18	Fin and winging	Water volleyball
Nov. 25-	Volleyball, badminton, table tennis	25	Gradually more into deep end	Log rolling
Dec. 9	" " " "			
BLOCK	" " " "	Dec. 2	Harness (floating, treading, swimming)..	Bobbing, number and distance
IV	" " " "	9	Human stroke	Water tag
Dec. 16-	Weight training, rhythmics	16	Side stroke	Come over tag
Jan. 13	Weight-isometric exercises; rhythmics-square dancing	Jan. 6	Crawl stroke	Keep away
BLOCK	Weight-pulleys; rhythmics - social dancing	13	Breast stroke	Follow the leader
V				
Jan. 20-	Weight training Rhythmics	20	Elem. back stroke	Safety tag
Feb. 3	Bar bells Music appreciation			
BLOCK	Rotators Music games	27	*Beginners*	
VI	Rowing — isotonic exercises	Feb. 3	Face float	
Feb. 10-24	Apparatus — tumbling, visual aids	10	Back float	
BLOCK	Apparatus, balance beam, tumbling, movies	17	Bobbing	
VII	Apparatus, low parallel bars, tumbling, arts and crafts	24	Swim — turn to back float	
Mar. 2-16	Apparatus, horse, tumbling, arts and crafts	Mar. 2	Back float — turn and swim	
BLOCK	Apparatus, low horizontal bars, tumbling, art appreciation	9	Fin or wing	
VIII	Apparatus, low horizontal bars, tumbling, painting, etc.	16	A.R.C. Deep Water Test	

ADAPTED PHYSICAL EDUCATION PROGRAM FOR ORTHOPEDIC STUDENTS — Continued

	Physical Education	Swimming		
	Registration	September 4		
	Orientation	9		
			SKILLS	GAMES AND STUNTS
Mar. 23- Apr. 13 BLOCK IX	Apparatus, tumbling, art appreciation, painting, etc. " " " " " " " " " " " "	Apr. 6 13 20	*Intermediates* Back Float — deep water Elem. back stroke	
April 27- May 11 BLOCK X	Group games, shuffleboard, clock golf Putting, tag games, modified bowling Circle games, chasing-fleeing, and ball activities	27	Dive — swim underwater Tread water 5-minute swim	
May 18- June 1 BLOCK XI	Adapted softball, field hockey, fly casting " " " " " " " " " " " "	May 4 11 18 25	Surface dive Swim on back — legs or arms only Back crawl Free style	
June 8-15 BLOCK XII	Track program, horseshoes, walking Softball throw, horseshoes, walking Wheelchair races Dashes, paper disc throw, etc.	June 1 8 15	Dive off springboard 10-minute swim Recreational swim	
	EXAMS		EXAMS	

TRACK EIGHT —

PROGRAM — ORTHO I (INDIVIDUAL)

Physical Training

Rubber chest exercises
Olympic weights
Rowing machine
Pulleys
Table and bars
One-wheel bike
Pulley machines
Walker — standing

Recreational Games

1. Quiet games (KIT)
   Social games (mixers)
   Mental games (Kit E)
      Brain teasers
      Word games
      Puzzles
2. Maze game
3. Marble football

Physical Activities

1. Hiking
2. Photography (movie and still)
3. Swimming and aquatics
4. Shuffleboard
5. Adapted tennis
6. Adapted paddleball
7. Golf and archery
8. Horseshoes

TRACK EIGHT —

PROGRAM — ORTHO I (INDIVIDUAL) — Continued

Physical Training	Recreational Games	Physical Activities
Ramp and stairs	4. Korean Yost	9. Quoits
Calisthenics — adapted program	5. Chinese Checkers	10. Croquet
	6. Chest-checkers	11. Lawn bowling
	7. Chongkak — Aee Dee	12. Table tennis
	8. Puzzles	13. French Hoop Game
	Nine Block	14. Hand wrestling
	Pyramid	15. Rhythms varied
	Tangram	16. Deck tennis
	Shuttle puzzle	17. Clock Golf
	Two-piece pyramid	18. Bowling — regulation rubber
	9. Arts and crafts	19. Candle Pin
	10. Skittles	20. Pool table — Billiards
	11. Table Cricket	21. Basket shooting — (Ortho basket)
	12. Box Hockey	22. Letterball
	13. Dutch Shuffleboard	23. Bocci
	14. Fore-Par	24. Track & field
	15. Hockey Pool	Javelin
	16. Pocket Golf	Discus
	17. Scoop Golf	Shot put
	18. Pic-E-U-Nee	Obstacle (slaloms)
	19. Shoot the Moon	25. Darts and jarts
	20. Mexican Bolero	
	21. Labyrinth	
	22. Roll Around	
	23. Three Dimensional Tick-Tack-Toe	
	24. Nine Men's Morris	
	25. Fox and Geese	
	26. Japanese Gomoku	

It is believed that all benefited from the first year of operation.

Dissemination

A broad public relations program informs the public of this program. News releases via newspapers, radio, and television help to publicize the activities.

Bryant J. Cratty

Professor and Director
Perceptual Motor Learning Laboratory
University of California at Los Angeles
405 North Hilgard Avenue
Los Angeles, California 90024

MATURATION AND CHANGE IN ABILITY TRAITS: IMPLICATIONS FOR EDUCATORS

Soon after he is born, an infant exhibits rudimentary evidence of abilities related to perceptual, motor, cognitive, and verbal behavior. These ability traits proliferate and diffuse as the infant matures, the rate of diffusion and the appearance of discrete traits within each category having been triggered by innate mechanisms and/or environmental conditions. Often, because of specific inborn or environmental characteristics, progress is uneven. For example, a child may develop cognitive abilities in a "normal" way, but experience problems in motor behavior; or he may have difficulties with perception, while progressing nicely in the verbal area.

As maturation continues, the child will build "bonds" between abilities within the same developmental category, or among those within different categories. For example, visual perception becomes bonded to verbal *expression* when the child begins to label the objects he has seen around him. These abilities are later bonded to skills in motor behavior when the child begins to trace or draw those shapes he first perceived, then visually discriminated, and finally named. Some of the bonds are determined by societal expectations (e.g., the bond between the visual *shapes* of words and their verbal-cognitive meanings); others are unique to the individual or to specific environmental conditions (e.g., the bonds formed by a university student as he learns a new language, or by the child of a naturalist as he names the birds he observes). During later stages of maturation, new bonds continue to be formed and some of the ability traits begin to function independently again. For example, a child who is younger than four requires a bond between the visual perception of his feet and their fundamental movements; but once he has formed the habit of walking, running, jumping, etc., he no longer needs to watch his feet as he does these things. Similarly, as he begins to read reasonably well, he tends to obviate the bond between lip movements and the cognitive representations of words.

These changes have a number of implications for educators. The teacher should be aware of normal maturation patterns and therefore sensitive to the number and type of ability traits that are apt to appear at particular times in his pupils' growth. He should also be aware of unevenness in a particular child's pattern of development — without drawing erroneous conclusions from it. For example, children who are physically handicapped are not necessarily retarded in their intellectual growth; some retardates have superior motor abilities; and clumsiness is not an indicator of limited potential for reading. In short, teachers who work with children of particular ages should be thoroughly familiar with the manner in which perceptual, motor, cognitive, and verbal behaviors emerge and integrate in children within that age group; and specialists in a given area (e.g., speech, reading, physical education) should know how traits within the related category of behavior tend to proliferate, diffuse, and bond with those in other categories.

The teacher can do much to enable his pupils to develop new abilities or to form new bonds between traits within the same or different categories. He can involve children who have difficulties with writing in activities which build or reinforce eye-hand coordination, and children who have difficulties with reading, in activities which strengthen the bond between visual perception and cognition. In some cases, it may be necessary to build "synthetic" bonds in order to circumvent various types of blunting in ability growth. For example, a teacher can be of great help to a child who lacks the incentive to read but who enjoys physical activity by involving him in reading and spelling games which require movement and activity. In each of the following units, movement has been used as a learning modality.

UNIT I: The Use of Movement in the Acquisition of Selected Academic Abilities

Goal: Developing prereading competencies through movement activities

Objective	Learning Experience	Resource
The pupil demonstrates the ability to attach verbal labels to common geometric figures.	• Tape, paint, or otherwise define a series of common geometric figures on the floor or playground. Ask the children to identify them by running to the correct figure as each one is called aloud. Then have them match cards on which the figures are pictured with the designs attached to the floor or playground. The children might learn from each other by calling the names of the figures aloud or pointing to drawings of them on the board and then running to find them on the floor.	*Active Learning*, by Bryant J. Cratty (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971) Taped or painted geometric figures Cards depicting geometric figures
The pupil demonstrates the ability to identify lower and upper case letters both visually and verbally.	• On the floor or playground, construct a large grid which contains all the letters in the alphabet. Then call out various letters and have the children respond by jumping into the correct squares. Ask one of the children to be the teacher. Have him print a letter on the chalkboard and then ask one of his classmates to jump into the box which contains the proper letter on the grid.	Same as above Taped or painted grid Individual letter shapes cut from cardboard Chalkboard
The pupil demonstrates the acquisition of visual-verbal matchings, and the ability to change letter and letter-combinations to letter sounds.	• Make sounds related to letters and have the children throw beanbags into the squares which contain the letters that correspond to the sounds.	Same as above Beanbags
The pupil demonstrates the beginning of the ability to spell.	• Divide the class into teams and have the children use individual letter shapes to spell out words either written on the board or given orally. The first team to complete the word correctly wins a point, and the first team to accumulate X number of points wins the game.	Individual letter shapes cut from cardboard
The pupil demonstrates the ability to analyze words, and beginning and ending sounds.	• Ask the children to listen carefully as you say a word and then identify the initial and terminal sounds of the word by throwing a beanbag into those sections of a grid which contain the letters corresponding to the sounds. Repeat the activity.	Letter grid Beanbags

UNIT II: The Use of Total Body Activity To Stimulate the Use of Selected Intellectual Abilities

Goal: Developing intellectual ability traits through movement activities

Objective	Learning Experience	Resource
The pupil demonstrates the ability to replicate movements in serial order.	• Place five chairs in random order around the room. Ask one of the children to "visit" one or more of the chairs, and then have other children revisit the chairs *in the same order*. Repeat the activity, gradually increasing the number of chairs to be visited and the complexity of the sequence.	*Intelligence in Action*, by Bryant J. Cratty (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972)

Objective	Learning Experience	Resource
	• Ask one of the children to perform two or more movements in sequence, and then have individual classmates perform the same movements in the same order. Repeat the activity, gradually increasing the number and complexity of the movements to be performed. Expand the activity by having the children perform movements at places marked by rugs, chairs, taped figures, or similar indicators.	*Physical Expressions of Intelligence*, by Bryant J. Cratty (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972) Space indicators
The pupil demonstrates the ability to classify, to code and decode, and to remember a code.	• Draw an X on the chalkboard, and tell the class that the symbol will be used to mean "Jump once, using both feet at the same time." Then draw three X's on the board and ask the children to respond correctly. They should jump three times, using both feet each time. Place a / on the board, and tell the class that it will be used as the symbol for hopping once, on one foot. Then draw a series of /'s on the board and ask the children to respond, as before. Draw a mixed series of /'s and X's on the board, and ask the children to "read" the symbols and respond accordingly. Repeat the activity, increasing the number of movements to be performed and the complexity of the sequence.	Chalkboard and chalk
The pupil demonstrates the ability to estimate his own performance more accurately.	• Ask one of the children to estimate how far he can jump from a given spot and then mark the place where he believes he will land. Then have him execute the jump, mark the spot, and measure the difference between the two marks (i.e., the difference between his estimate and his performance). Repeat the activity until the child's estimate more closely approximates his actual performance — being careful to build, rather than to destroy, the child's self-image.	
The pupil demonstrates the ability to classify and analyze.	• Have the children watch as you execute a series of movements such as jumping backwards six times on one foot and in a straight line. Then ask them to describe your activity in one word. Using the word (e.g., *jumping*) as a category, have the children identify other activities which include or resemble jumping. Then ask them to identify a characteristic of your activity (e.g., *backwards, six times, in a straight line, on one foot, slowly or quickly, high or low*) and use their answers as categories for the classification of other activities. Exhaust the number of descriptive words that relate to the given series of movements. Discussion can lead to the analysis of words. For example, the word *book* has four letters — it starts with a *b*, ends with a *k*, and has two *o*'s in the center. Name some words that sound like *book*. Name some that look like *book*. What are the differences between them?	

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Board of Education of the City of New York,
Bureau for Children with Retarded Mental Development
65 Court Street
Brooklyn, New York 11201

PERCEPTUAL-MOTOR DEVELOPMENT

Educable Mentally Retarded
Trainable Mentally Retarded

All Levels

Ralph Bova
Physical Education Coordinator

Preliminary Note

The President's Council on Physical Fitness has strongly recommended that all children participate in vigorous physical activity every day. In addition, the Council has stressed the need for careful diagnosis of the physically underdeveloped with the resultant provision of appropriate remedial programs. These are particularly important for children who are mentally retarded, for underdeveloped muscles will atrophy without use and therefore add another disability to the one they already have.

Active participation in physical fitness and recreational activities can do much to ensure sound muscle growth and coordination; but it can also stimulate learning, improve *mental* health, and help to bring about a greater degree of self-realization. Recent research has shown that retarded boys and girls respond favorably to this type of activity because it enables them to:

- Express themselves in nonverbal, but symbolic ways;
- Experience achievement and success; and
- Develop self-confidence, a feeling of value or importance, and an increased ability to adjust to people, things, and circumstances.

Thus, involvement in a wide variety of physical activities can serve as a springboard for success in areas that used to be considered beyond the realm of possibility for the mentally handicapped.

The following list of objectives presents a few of the many outcomes that can be achieved through a comprehensive physical education program for children with retarded mental development. The items in each category are neither exclusive, nor all-*in*clusive; and they have not been prioritized. They are simply intended to illustrate the variety of areas in which progress can be expected.

PHYSICAL OBJECTIVES

- To improve general physical health and appearance
- To develop and improve basic motor skills and fundamental body movements such as walking, running, climbing, throwing, catching, grasping, etc.
- To increase physical stamina, motor ability, and physical fitness through improved coordination, strength, muscular endurance, cardiorespiratory endurance, muscular power, agility, balance, flexibility, and speed
- To improve posture, body mechanics, rhythm, grace, and general control of body movement
- To improve sensory perception

SOCIAL OBJECTIVES

- To develop the necessary skills and abilities for successful participation in wholesome physical education activity
- To increase social independence through a variety of group or team activities
- To experience greater degrees of acceptance and belonging through participation in and contribution to social and recreational activities

- To develop better self-help skills
- To become a better citizen and a more effective contributor to the community
- To participate more fully in family activities
- To adjust to group demand, and to the group
- To develop respect for materials, equipment, and the rights of others
- To become more cooperative; to learn to take turns; and to share responsibilities, equipment, and supplies
- To develop and exhibit leadership qualities
- To become more sociable, outgoing, and friendly; to get along better with others
- To develop safety skills and an awareness of hazards

INTELLECTUAL OBJECTIVES

- To experience spontaneous and meaningful verbal and nonverbal modes of creative expression through rhythms, dancing, singing, and mimetic activities
- To improve language development and communication skills
- To improve the ability to concentrate for longer periods of time
- To improve the ability to follow directions
- To develop problem-solving skills and abilities
- To become more curious about people, things, and situations
- To develop interests, skills, and hobbies that have lifetime value and application
- To develop previously untapped talents
- To become more observant and better able to understand, to remember, and to make decisions
- To improve visual and auditory discrimination
- To sharpen tactile senses with or without visual clues
- To develop thought patterns for perception and movement skills
- To improve visual-motor performance in dealing with concept skills

EMOTIONAL OBJECTIVES

- To develop greater degrees of courage, self-confidence, and poise
- To increase self-respect and develop a more positive self-image
- To experience satisfaction through participation
- To feel more and more secure in a variety of situations
- To experience recognition and approval for achievement
- To experience greater feelings of accomplishment, adequacy, and personal fulfillment
- To become more independent and self-directing
- To increase self-control

- To develop positive attitudes toward play
- To become better able to take direction, authority, and constructive criticism

The objectives listed above can be achieved through a variety of physical fitness and recreational activities such as the following:

GAMES OF LOW ORGANIZATION

Games of low organization are useful in helping children to develop fundamental skills, an understanding of the rules and regulations for playing group games, a greater degree of self-confidence, and the ability to work and play with others. There are a number of types — locomotor, chasing and fleeing, throwing and catching, kicking, and relay activities; stories, plays, and mimetics; and classroom games. Within each of these categories is a spectrum of activity ranging from fairly simple games designed for individual achievement to more complex forms requiring group participation and teamwork. In many cases, the rules for a given activity can be varied to fit whatever facilities and equipment are available. Changing the size and shape of the play area, the number and role of the players, the formation of the groups, the number and size of the balls (if balls are used), the method of locomotion, and/or the objectives of the games can also be useful in meeting individual pupil needs while capitalizing on individual strengths and interests.

PERCEPTUAL-MOTOR DEVELOPMENT ACTIVITIES

Activities of this type are designed for helping children to build neuromuscular patterns and reactions which are inherent in and transferrable to higher motor skill performance. They are generally arranged according to levels of difficulty and/or complexity within the following categories: movement exploration, balance activities, airborne or jumping activities, eye-hand coordination activities, and perceptual development activities. The items should be adapted to individual pupil needs and interests; but it is particularly important that they be experienced *sequentially* and *under different circumstances* in order to ensure a sound, progressive development of perceptual-motor skills and capabilities.

RHYTHM, SINGING, AND DANCING ACTIVITIES

Since rhythm is integral to movement, rhythmic activities usually begin with clapping, beating, tapping, walking, jumping, running, hopping, skipping, sliding, etc., and progress to simple expressive movement and basic dance routines. More advanced levels include various forms of folk, square, social, and creative or improvisational dancing. Rhythmic activities are usually reinforced by singing games which encourage the children to express themselves individually and as part of a group. These progress from simple activities in which the children perform without partners to games which involve pairs and then a series of changing partners in increasingly complex movements. Music, of course, is fundamental to rhythms, singing, and dancing; but it is also useful for other types of activity because it creates a mood, encourages listening, develops longer periods of concentration, and coordinates the effort by establishing a beginning, a rhythm, and an end.

PHYSICAL FITNESS ACTIVITIES

Children with retarded mental development have a greater need for physical fitness activity than nonretarded children because they tend to carry more fat, to have less strength, and to fatigue more quickly than their "normal" counterparts. Fortunately, research has indicated that vigorous physical activity can produce significant improvements in the fitness of these children. Accordingly, a sequence of exercises has been developed for each of the following areas:

- *Muscular fitness*

  Muscular fitness refers to the strength or force produced by specific muscle groups and to their ability to maintain that strength or force for prolonged periods of time. Chronic fatigue is a strong indicator of poor muscular fitness because even routine tasks apparently require more effort than the muscles can produce without tiring. Poor posture, protruding stomachs, pain in the lower back, and aching feet are also associated with weakness in the muscle area. Regular exercise designed to improve muscular fitness can do much to eliminate these deficiencies and to enable one to perform common tasks more quickly and easily.

- *Organic fitness*

  Organic fitness refers to the condition and operation of the cardiovascular system. It is characterized by a strong heart which rests longer between beats; adequate flow of blood between the lungs, the heart, and the limbs; and a high work capacity in all of these parts. Daily activities such as walking and climbing stairs are performed without puffing; and participation in recreational activities like swimming, hiking, bicycling, and running does not produce undue fatigue.

- *Physique*

  The term *physique* refers to the general structure of the body and therefore includes the amount and distribution of body fat, the size of the bones, and the size and density of the muscles. Physical activity — and the lack of it — influence all three components. Good posture; a healthy, lively appearance; and a general efficiency in the operation of the various body parts are solid indicators of a well developed physique.

Unfortunately, exercises designed to improve the fitness of one area will not necessarily improve that quality in another. Exercising the legs will not strengthen the arms or shoulders; and pushups and pullups will do little to develop agility or cardiovascular efficiency. For this reason, it is important to classify fitness activities according to their major contribution to physical development and then design a program which is appropriate for the pupil's individual needs within his overall pattern of growth.

ELEMENTARY GYMNASTICS

Elementary gymnastic activities fall within two categories: stunts and tumbling.

- *Stunts*

  Activities within this category are useful for improving coordination, agility, balance, strength, flexibility, and teamwork. They are also prerequisites for tumbling, and they provide an excellent means of preparing children for other types of activity. Because they involve both individual and small group performance, and because the pupil's inability to do a given stunt does not automatically prevent him from successfully completing another, stunts can easily be adapted to a variety of teaching methods and situations. In addition, they require little or no equipment. Many can be performed on the bare floor or ground; some require the use of mats; and others are designed for the balance beam.

- *Tumbling*

  Tumbling is one of the most beneficial parts of the physical education program because it promotes the development of strength, flexibility, coordination, and agility through activities which enable the children to learn how to turn, twist, roll, spring, balance, and fall properly. The activities are interesting, varied, self-motivating, and almost limitless in number. As a result, they can be sequenced to meet individual needs and adjusted whenever necessary as the pupil moves through his program at his own rate of speed.

LEAD-UP GAMES FOR TEAM SPORTS

Lead-up games provide an intermediate stage of activity between games of low organization and regulation team sports. Their function is to enable the pupil to apply the skills and knowledge he acquired through developmental experiences in physical education to a team effort within the restrictions of a particular game. For this reason, direct instruction in and strict adherence to the rules and regulations of the game should be secondary to maintaining active play.

The lead-up games most often included in a school program are modified forms of soccer, basketball, volleyball, football, baseball, and track and field sports. Through direct participation in these types of activity, the pupil should continue to develop his own abilities, and learn something about teamwork and good sportsmanship as well.

Neil Stoller
Physical Education Resource Specialist-Teacher Trainer

Educable Mentally Retarded
Trainable Mentally Retarded
Preprimary
Primary

UNIT I

Goal: Developing basic movement awareness

Objective	Learning Experience	Resource
The pupil demonstrates an awareness of the parts and planes of his body. He also develops greater strength and flexibility.	• Scatter a number of inner tubes around the play area, with ample space between them. Then ask each of the children to step inside a tube, pull it up over his head, and stretch it three or four times in each of the following positions: - In front of his chest, - In front of his knees, - In front of his toes, - Above his head, - Behind his neck, and - Behind his back. Ask the children to sit on the floor, with their legs extended forward and one end of the tube under their heels, the other held in both hands. Then have them stretch the tube by lying back and returning to the sitting position five times. Ask them to sit with one leg bent at the knee and one end of the tube under the heel, the other held in both hands. Then have them stretch the tube by extending the leg and returning it to the bent-knee position five times. Repeat with the other leg, and/or alternate legs.	Inner tubes from bicycle tires (available without charge from most bicycle repair shops)
	Ask the children to stand up; step on the tube with both feet; pull it up with both hands; and then jump forward, backward, and sideward.	Bicycle inner tubes
The pupil demonstrates an awareness of the fact that the body moves in various ways.	• Ask the children to use the tubes in imaginative activities such as the following: - Pretend to be a *work horse* by placing the tube around your neck like a collar, walking slowly like a horse at work, and making the sounds a horse would make in that situation. - Pretend to be an *elephant* by extending the tube from your nose like a trunk, swaying it from side to side, pretending to suck up water and either drink it or squirt it over your head or at	

Objective	Learning Experience	Resource
	another "elephant," and mimicking the sound of an elephant's snort and trumpet. - Pretend to be a *horseback rider* by placing the tube around and between your legs, stretching the front part like a set of reins, striking your hand against the tube on one leg like a whip, galloping around the play area, and pulling up on the tube in front as a signal to slow down and stop. - Pretend to be a *pizza maker* by tossing the tube high above your head, catching it on your wrists, and stretching it in all directions. - Pretend to be a *man with a broken leg* by stepping on one end of the tube, stretching the other over your shoulder, and walking around the play area as though you had a stiff or pegged leg.	
The pupil demonstrates improved eye-hand coordination. He also demonstrates increased awareness of body parts and laterality.	• Have the children throw the tubes into the air and catch them with various parts of their bodies. Specify a sequence of parts on one side of the body (e.g., the *left* hand, wrist, arm, elbow, shoulder) and then on the other. Vary the activity by having the children spin the tubes around one or both wrists, ankles, or shoulders; one or more fingers; their waists, etc. • Play a modified game of ring toss. Divide the children into pairs and have them stand facing each other in lines a few feet apart. - One of the children in each pair presents the "stakes" by standing on one foot with the other held forward a comfortable distance from the ground, his arms outstretched to the sides, and his head bent forward. - The other partner attempts to ring the extended foot, arms, or head with an inner tube. Only two throws are allowed. The player scores two points if he rings his partner's head, and one point if he rings his partner's foot or arm. Have the children exchange roles and repeat the game.	Bicycle inner tubes
The pupil demonstrates the ability to move through space in various directions.	• Ask the children to scatter themselves throughout the play area, each one standing in the circle of an inner tube with ample space around him for activity. Then ask them to: - Jump in and out of the tube with both feet — forward, backward, and to each of the sides. - Hop in and out of the tube on one foot — again forward, backward, and to the sides. Repeat, using the other foot.	Bicycle inner tubes

Objective	Learning Experience	Resource
	- Leap back and forth over the tube. - Walk, run, and/or skip around the tube — first in one direction, then in the other. Sharpen the children's perception and add to the fun by using signals for changes in direction or activity. Have them move forward *and* backward.	

UNIT II

Goal: Developing body control through rhythmic activity

Objective	Learning Experience	Resource
The pupil demonstrates an awareness of tempo.	• Have the children scatter themselves around the play area and then ask them to listen as you beat a drum. Gradually increase and decrease the tempo several times. Then have the children walk to the drumbeat — starting when it starts, matching its tempo, and stopping when it stops. Repeat with different types of locomotor activity, such as hopping, skipping, jumping, etc.	"Join in the Game" by Hap Palmer, from *Folk Song Carnival* (Educational Activities, Inc., Freeport, New York), side 2, band 5 A record player A drum
The pupil demonstrates the ability to distinguish between beat, tempo, and intensity.	• Have the children do Indian war dances. Ask them to form a circle, to listen carefully to the drumbeats, and to do the following steps: *The canoe step* The rhythm pattern is a loud beat followed by a soft beat. On the loud beat, the dancer bends forward and steps down hard on the ball of one foot; on the soft beat, he bends backward and steps down hard on the heel of the same foot. The dance continues with the forward/backward motion and the toe/heel step on alternate feet accompanied by a loud warhoop as the tempo of the drumbeat increases. (It might be helpful to have the children stand in place and clap the beat before they begin to do the canoe step.) *The buffalo step* The rhythm pattern is one loud beat followed by three soft ones. On the loud beat, the dancer jumps to one side; on the soft ones, he taps the floor with the toes of one foot. On the next loud beat, he jumps to the other side and then taps the next three beats with the toes of his other foot. The tempo should increase as the dancers progress.	A drum

Objective	Learning Experience	Resource
The pupil demonstrates an awareness of speed and directionality in movement.	• Have the children scatter themselves around the play area and use their inner tubes like pogo sticks — stepping on the inside of one end, pulling up on the other, and jumping in all directions to the beat of the drum. (Spatial awareness is inherent in this activity as the children must watch where they are going in order to avoid bumping into each other.) Beat the drum slowly at first and gradually increase the tempo to very fast, then lessen it again. In an effort to develop directionality, have the children jump forward for a while — or backward, or to the left or the right — until they seem to have a sense of direction as it relates to movement.	Inner tubes from bicycle tires A drum
The pupil demonstrates an awareness of accent and meter in music.	• With the children in a scatter formation around the play area, have them listen carefully as you beat the rhythm of a march on the drum: *da-da-da-da-dum, da-da-da-da-dum, da-da-da-da-da-da-da-da-da-da-dum.* When the children have grasped the meter, encourage them to move in response to it — stiff-legged like wooden soldiers, perhaps, with arms bent at the elbows moving up and down to the beat. At the appropriate time, introduce a recording like one of the marches in Album 11 of Educational Activities, Inc.'s *Honor Your Partner*. It may be advisable to have the children listen and move their arms to the beat before marching to the music.	*Honor Your Partner* (Educational Activities, Inc., Freeport, New York), Album 11-Marches: side 2, band 2 A drum
The pupil demonstrates an awareness of the various moods of music.	• Have the children move freely and imaginatively to various types of music. Listen to a number of recordings and select those which lend themselves to movements which remind one of elephants, bumblebees, flowers blooming, etc. Move the children through specific types of activity at first; then play the recording and ask them to relate the activities to the music. Play the recording again, and have the children carry out their decisions in moving to the music.	*Honor Your Partner*, Album 7-Rhythms
The pupil demonstrates an awareness of patterns in movement.	• Play a variety of recordings with different moods and patterns, and encourage the children to "do their own thing" in response to the music. Caution them to listen carefully because the moods and patterns might change and these, in turn, would suggest a change in movement.	*This Is Tom Jones* (London Records, Inc., 539 West 25th Street, New York City, New York 10001) Any recording played at different speeds
The pupil demonstrates an awareness of dance. He also demonstrates the ability to follow a dance routine.	• Choose a recording such as the one listed in the resource column and develop a dance pattern in which the routine changes when the selection hits a natural break. For example, a pattern for "It's a Small World" might look like this: The children stand around an inner tube, holding it with one hand and stretching out. Music: "It's a Small World." Walk around to the right. *Break in the music.* Change hands and walk around to the left. *Break*	*Mod Marches* (Educational Activities, Inc., Freeport, New York) An inner tube from a tire

Objective	Learning Experience	Resource
	Face front, walk in and out. *Break* Walk around to the right. *Break* Walk around to the left. *Break* Stop! Shake the tube. Repeat the sequence until the end of the record.	

Ralph Provenza
Physical Education Resource Specialist-Teacher Trainer

Educable Mentally Retarded
Trainable Mentally Retarded
Preprimary
Primary

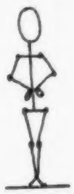
UNIT I

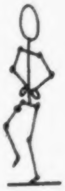
Goal: Developing balance

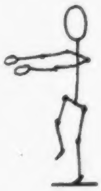
<table>
<tr><th>Objective</th><th>Learning Experience</th></tr>
<tr><td>The pupil demonstrates the ability to balance in various positions.</td><td>

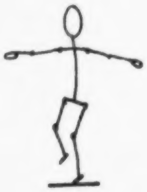
- Ask the children to stand in a scatter formation, facing you, with their feet together and their hands at their waists. Then have them balance on the left foot for a count of five, return to the original position, balance on the right foot for a count of five, and again return to the original position.

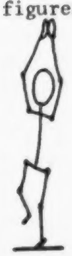
Repeat the activity, this time adding the arm movements indicated by the figures below:

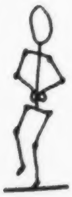

1
Hands at waist, feet together


2
Hands at waist, balance on one foot


3
Arms directly forward


4
Arms extended to the sides


5
Arms directly overhead


6
Hands at waist, balance on one foot

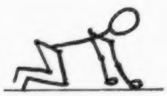
Return to Position 1, and repeat the sequence while balancing on the opposite foot.
</td></tr>
</table>

Objective

Learning Experience

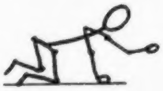
- Then have the children perform the following activities on their hands and knees, making sure that each child has a sufficient amount of space to balance comfortably:

1



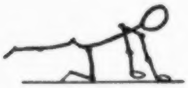
Balance on hands and knees

2



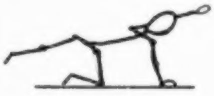
Lift and extend one arm

3



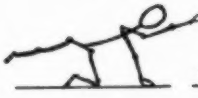
Lift and extend one leg

4



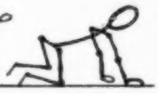
Lift and extend one arm and one leg on the *same side* of the body

5



Lift and extend one arm and one leg on *opposite sides* of the body

6



Return to Position 1

The pupil demonstrates the ability to balance while walking forward, backward, and sideward.

- Have the children perform the following activities, each child progressing from one stage to the next as his skill improves:

Stage 1

Have the child walk between two lines (chalk lines, paint lines, ropes, tape lines, rows of milk containers or plastic bleach bottles, etc.) spaced approximately 18" apart. As the child progresses, bring the lines closer together until he can walk between them only by putting one foot in front of the other. Ask him to walk forward first, then backward.

Stage 2

Have the child walk *on* a line (a taped, chalked, or painted line in this case). Make the line about 8" wide and gradually reduce it to half an inch. Ask the child to walk forward, backward, and sideward, without crossing his legs. Then have him walk to the center of the line, turn around, and walk back.

Stage 3

Have the child walk on a 12-foot two-by-four placed on the floor. Ask him to walk forward, backward, and sideward, and then walk to the center, turn around, and walk back — as he did in Stage 2. As the child progresses, lift the two-by-four a short distance from the floor and have the child perform his balancing activities again. Gradually increase the height of the plank to a foot or so, making sure that it is sufficiently stable to prevent any injury to the child.

The pupil demonstrates both static and active balance.

Vary the preceding stages by:

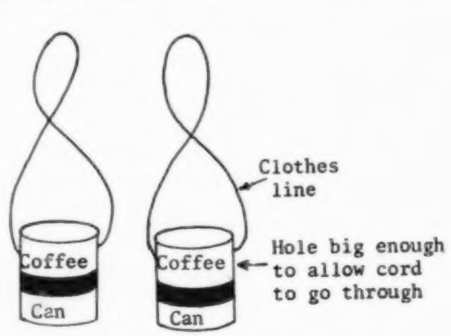
- Having the child balance a beanbag (or two, or three, or more) on his head, shoulders, arms, etc., or hold it under his chin as he performs the activities described above.
- Developing an obstacle course which requires the child to step over a bleach bottle, through a hoop or an inner tube, under a stick, etc., as he performs the activities described above.

Objective

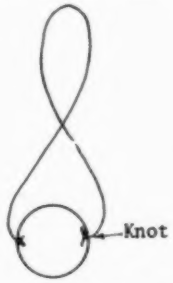
The pupil demonstrates the ability to balance with special kinds of equipment.

Learning Experience

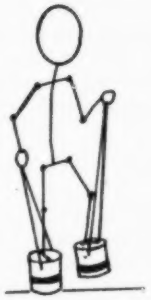
- Have the children do the Tallman Walk, using 1- or 2-pound coffee cans in the following manner:


Clothes line
Coffee
Can
Coffee
Can
Hole big enough to allow cord to go through

FRONT VIEW

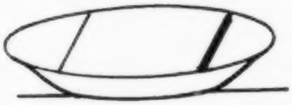


INSIDE VIEW

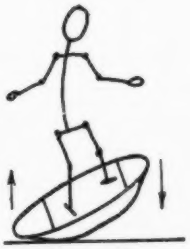


TALLMAN WALK

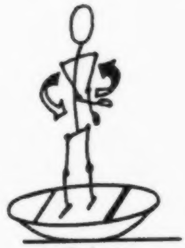
- Have the child perform balancing activities in the spatial trainer (a Grimm Product available from Educational Activities, Inc., Freeport, Long Island, New York):



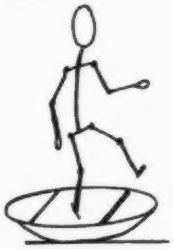
SPATIAL TRAINER



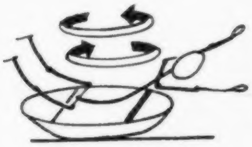
Tip right, then left



Twist



Balance on one leg

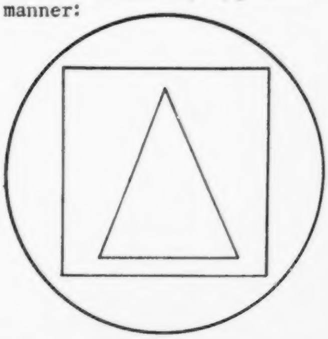


Lie and Spin

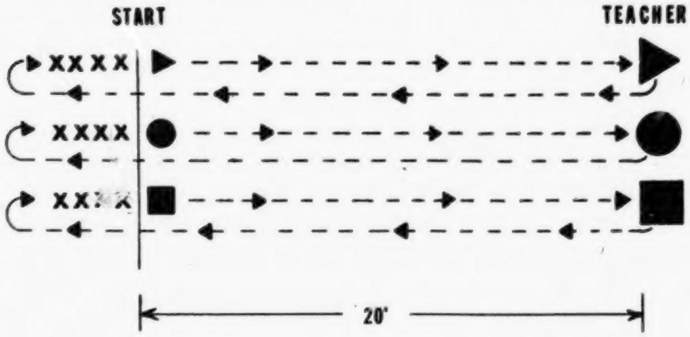
- Have the children walk forward, backward, and sideward on stilts or "hi-stiks" and later, perhaps, do high-stepping routines.
- Have the children bounce in various directions on pogo sticks.

UNIT II

Goal: Developing the ability to discriminate between geometric shapes

Objective	Learning Experience
The pupil demonstrates the ability to discriminate between a square, a circle, and a triangle.	• Have the children hold hands, form a circle, and sit down. Include yourself as part of the circle. Then give each child a set of geometric shapes (a circle, a triangle, and a square), and ask him to place the shapes in front of him in any order. Show the children a circle and ask them to point to or hold up the same shape in their own sets. Repeat with the triangle and the square. Then ask one of the children to select a shape and hold it up for the others to match in the same fashion. Repeat until all or most of the children have had an opportunity to hold up all the shapes for matching.
The pupil demonstrates an increased understanding of the following concepts: *over, front, back, on, off, onto, around, forward, backward,* and *to the side.*	• Have the children stand in a circle with the three shapes on the floor in front of each child and enough space on either side for activity. Then have them repeat your movements as you: Jump *over* the shapes in *front* of you, and then jump *back.* Jump *on* the circle with both feet, and then jump *off.* Hop *on* the triangle, and then hop *off.* Run *onto* the square, and then run *off.* Run *around* all the shapes. Pick up a square with one hand and a circle with the other. Hold them at your waist and then bend *forward, backward,* and *to the side.* Repeat several times. • Tape, paint, or otherwise indicate a large circle, square, and triangle on the floor or playground. If space is limited, all three shapes can be developed in the following manner:  Divide the children into three groups and give each member of one group a circle, each member of another group a square, and each member of the third group a triangle. Then select one of the shapes and hold it up for all to see. Have those children with the same shape run to its counterpart on the floor, go around it once in single file, and return to their places. Repeat the activity with the other two shapes and then vary the procedure by holding up more than one shape at a time and/or having the children walk, hop, skip, etc., around the corresponding shape(s) on the floor.

Objective	Learning Experience
	• Have the children do "shape-up relays." Divide the children into three teams and label them Triangles, Circles, and Squares. Give each player the shape which represents his team. Define a starting line about 20' from the shapes on the floor, and have each team sit behind the line in relay fashion, facing the shape for which it is named. At the signal "Shape up!," the first player on each team gets up, runs to his symbol on the floor, deposits the shape he was given, and runs to the back of his relay line. As soon as he recrosses the starting line, the next player on his team gets up and repeats the performance. The first team to complete the relay is the winner. Change teams and do the relays again until each child has had an opportunity to play with all the shapes.



Martha Brown

Project Associate
Professional Studies Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

PERCEPTUAL— MOTOR DEVELOPMENT

Educable Mentally Retarded
Trainable Mentally Retarded
Emotionally Disturbed

Primary
Intermediate

Preliminary Note

During the early 1960's, personnel at the Curriculum Center at the State University of New York at Buffalo, under the direction of Robert S. Harnack, began to develop computer-based resource units which include a greater number of items than traditional units and therefore offer a greater number of options for instructional planning. Because the information is computerized and coded to learning variables, it can be sorted rapidly and used to tailor unique programs for individual pupils according to profile informatior supplied by the teacher.

Skill development programs and units of study on such topics as world health, speaking and listening, career education, etc.,are currently available for pupils at all levels, K through 12. They were written by groups of teachers who, working cooperatively,

- Identified all of the major objectives they felt a teacher might select for the study of a given topic;
- Listed all of the books, films, filmstrips, and similar resource materials that seemed to relate to the topic;
- Wrote as many statements of content about the topic as they considered appropriate; and
- Devised a wide variety of activities that seemed relevant to the topic and to the many characteristics individual learners may exhibit.

The materials, content items, and activities — plus a series of evaluation devices — were then coded to the list of objectives, and the resulting strategies further coded to learning variables and stored in the memory bank of a computer. Thus the teacher can input instructional objectives and individual pupil profiles, and receive printouts of suggested content, materials, activities, and/or evaluation devices for whole classes and for individual children. These are not prescriptive, however. In the final analysis, it is the teacher who decides whether Chuck should read a particular book, whether Alice should take a particular field trip, or whether Don will really learn something by building a particular model. Additional information (costs, request procedures, unit abstracts, etc.) can be obtained from:

Computer Assisted Planning
Communications Center
Professional Studies Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222
(716) 837-0291

The following models are derived from the computer-based resource unit on movigenics (006), for children in levels K through 6. A complete listing of the instructional objectives and learning variables for CBRU 006 has been included after the third model unit.

UNIT I: Sensory Awareness

Goal: Involving the sensory modes through both cognitive and psychomotor domains

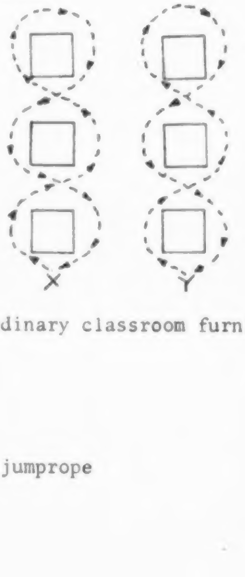
Objective	Learning Experience	Resource
AUDITORY MODE		
Objective 76: To identify sounds within the child's environment (animal, etc.)	• In this activity, the child sees objects and then identifies by sound what people do with them. Show the children two objects (e.g., a cup and a spoon). Then have them close their eyes. Stir the spoon in the cup and ask one of the children to identify what you did. Tap the cup, and have another child identify your action from the sound. Repeat the activity with other items (e.g., a book and a card — riffling the pages, tapping the card against the book, etc.).	A cup, a spoon, a book, a card, and similar items
	• Have the pupils clap their hands, shake rattles, drop marbles in a jar, pour water in a glass, rustle or crumple paper, etc. Taperecord the sounds and play them back later, again having the children identify the actions from the sounds.	Rattles, marbles, a jar, water, a glass, paper, etc. A tape recorder
	• Ask the children to close their eyes and listen carefully as you do the following things in sequence: - Sharpen a pencil, knock on a door, rap on a table - Bounce a ball, clap your hands, tap your foot - Write on the board, open a window, walk across the floor, and drop a book - Tear a paper, open a drawer, slide a chair across the floor, hum a few notes Then have the children identify your activities, again *in sequence*.	Classroom equipment
	• Use a recording such as Saint-Saens' *Carnival of Animals* to help the children to listen carefully and more appreciatively. First play the complete recording for their listening enjoyment; then play it through a second time and have them listen for the sounds of certain animals. Once the children are familiar with the music, have them organize into small groups and do the activities suggested by Hap Palmer's recording, "Listen and Do." Ask observers to guess what is being portrayed.	*Carnival of Animals*, by Camille Saint-Saens "Listen and Do," by Hap Palmer, from *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. III: side 1, band 2
Objective 82: To identify the direction of a sound source.	• Ask for volunteers and appoint a leader from among them. Then have the children close their eyes and listen very carefully as the leader makes sounds from different parts of the room. Ask them to guess the part of the room (i.e., the direction) from which the sound came. Repeat the activity, this time asking the children to determine whether the source of the sound is near to them or far away.	

Objective	Learning Experience	Resource
TACTUAL MODE		
Objective 178: To identify the weight of objects by touch.	• Blindfold a volunteer and lead him to a table with a series of objects on it. Then ask him to sort the objects according to weight by placing the heavy objects on his right and the lighter objects on his left.	Objects of various weights
Objective 186: To respond when touched on various body parts.	• Divide the class into two teams and blindfold one group of players. Ask each of the children on the other team to touch a blindfolded child, and then have the latter reciprocate by touching the nonblindfolded player in exactly the same part of the body where he had been touched. Have the teams switch sides and encourage them to touch each other on different parts of their bodies.	
	• Play Japanese tag. Appoint a volunteer to be "It" and have the others scatter about the room. The player who is It runs after the others and attempts to tag one of them. The person tagged becomes the new It. Placing his left hand on the part of his body where he was tagged, he chases after the others and so the game goes on.	
VISUAL MODE		
Objective 124: To use the eyes to outline geometric forms.	• Using basic geometric forms drawn on cards or made of wire, wood, etc., have the children identify one of the forms through sight or sight and feeling and then name everything in the room which has the same shaping (e.g., a circle — a clock, the top of a jar, a button, the eraser on a new pencil, etc.). Repeat the activity with other geometric forms.	"Triangle, Circle, or Square," by Hap Palmer, from *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. II: side 2, band 1 Flashcards
	• Arrange furniture in large geometric patterns (e.g., circles, lines, squares, triangles). Then have the children walk the patterns and identify them.	"Walk Around the Circle," by Hap Palmer, from *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. III: side 2, band 5 "One Shape, Three Shapes," by Hap Palmer, from *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. II: side 1, band 4 Benches, chairs, or desks

Objective	Learning Experience	Resource
Objective 126: To describe visual stimuli in terms of size and shape.	• Seat the children around a table and place such items before them as a pencil, a nail, a container of paste, etc. Then give one of the children a pencil which looks different from the one on the table, and ask him to match it with one of the objects before him. If the difference between the appearance of the object you give the child and the one he is to match it with is too great, you may find that he will match in terms of color or some other characteristic rather than size and shape.	A variety of items
	• Play "Hide and Touch." Put a volunteer under an old sheet and then ask him to hold up his hand, foot, elbow, knee, head, shoulder, backside, etc. Have the other children describe what they see and name the body part in each case.	An old sheet

UNIT II: Spatial Awareness

Goal: Developing the pupil's ability to estimate, measure, and organize space, and to live within his environment

Objective	Learning Experience	Resource
Objective 47: To avoid objects in a field of space.	• Do Figure 8 relays. Divide the class into two teams and line them up in single file, with three boxes placed approximately 15' apart in the running lane of each team. The first box in each of the two lanes should be 15' from the starting line. At a signal, the first player on each team runs to the left of the first box in his lane, to the right of the second box, to the left and completely around the third box, to his right past the second box, to his left past the first box, and back to the line, where he taps the next player in the relay. The winning team is the one that finishes first.	6 boxes 
	• Create an obstacle course with ordinary classroom furniture and then have the children touch every obstacle — or be careful not to touch any obstacle — as they navigate the course by creeping forward, crawling backward, running sideward, etc. Repeat the activity, changing the directions in a variety of ways.	Ordinary classroom furnitur
Objective 48: To identify the location of sensory stimuli in various fields of space.	• Appoint two volunteers to turn the jumprope and ask all of the other children to line up in single file on one side of the rope. As the children chant *Teddy Bear, Teddy Bear, turn around.* *Teddy Bear, Teddy Bear, touch the ground.* *Teddy Bear, Teddy Bear, show your shoe.* *Teddy Bear, Teddy Bear, please skiddoo!*	A jumprope

Objective	Learning Experience	Resource
	have one after another jump in, enact a line, and jump out again.	
	• Place a number of strong smelling items (e.g., onions, garlic, cinnamon, lemons, oranges, perfume) in various parts of the room. Then blindfold the children, and have them identify each of the items and its general location in the room.	Aromatic substances
	• Play "Musical Statues." Select a judge from among a group of volunteers. Then play the piano or a recording, and have the children march in a circle to the music. When the music stops, the marchers should "freeze" in place and stay as motionless as statues until the music starts again. Those who laugh or move or otherwise "come to life" when the music is not playing are eliminated. The game continues until all the marchers and statues are "out." The last one to be eliminated wins the game.	A piano, or a record player and a record
	• Play "Pin the Tail on the Donkey." Attach a drawing of a donkey just above the level of the children's shoulders, on a wall about 10' from a starting point. Give each player a tail and a pin or a piece of tape. Then blindfold one of the players at the starting point, turn him around three times, and face him in the direction of the donkey. His task is to pin his tail in the appropriate place on the drawing. Repeat the activity until every player has had a turn. The child who pins his tail closest to the place where it belongs wins the game.	Any drawing which presents a target Tails, ribbons, etc., and pins or tape
Objective 46: To visually identify the location of objects in relation to changing body movements.	• Do tunnel races. Divide the class into teams and have the players on each team line up in single file with their legs apart, forming a tunnel. On the word *GO*, the last player in each line should crawl between the legs of the players in front of him until he reaches the head of the line, and then stand up again with his feet apart. Each player moves through the tunnel as quickly as he can, from the back of the line to the front. The first team to return to its original position wins the race.	
	• Play "Jump the Shot." Give a long piece of rope to one of the children and have the others stand around him in a circle. As the player in the center of the circle swings the rope along the ground under their feet, the other players must jump to avoid getting "tagged." The first one who fails to jump fast enough gets tagged by the rope and is "It." He changes places with the player in the center, and so the game goes on.	A long piece of rope
	• Play "Ocean Waves." Have the children form a circle with their chairs and then sit down. Ask one of them to stand in the center. As he calls "Slide left" or "Slide right," the seated players should attempt to fill the vacant chair before the player in the center can by moving quickly in the given direction as the vacancy comes next to them. If the center player gets the seat, the one who should have occupied it moves to the center of the circle and the game continues.	

UNIT III: Body Awareness

Goal: Developing the pupil's composite awareness of his body

Objective	Learning Experience	Resource
Objective 22: To identify selected parts of the body.	• Have the children sing the following lyrics to the tune of "The Battle Hymn of the Republic": *Little Peter Rabbit had a fly upon his nose,* *Little Peter Rabbit had a fly upon his nose,* *Little Peter Rabbit had a fly upon his nose,* *And he flipped it and it flew away.* Once the song is familiar, ask the class to sing it through again — this time expressing some of the words in the following manner: - At the word *Rabbit*, form a pair of rabbit ears by placing one hand on either side of the head, with the index finger pointing upward and outward; or use one hand at the back top center of the head, with the first two fingers spread in a V. - At the words *fly* and *flew*, make a flying motion with both arms. - At the word *nose*, touch the nose with the fingers of one hand. - At the word *flipped*, make a flipping motion with one or both hands. Repeat the activity, this time substituting the movement for the words as in "John Brown's Baby Had a Cough Upon His Chest." The poem "What Am I?" can be used in a variation of the same activity: *A face so round,* (Form a circle with both hands) *And eyes so bright,* (Point to the eyes from the sides with the fingers of either hand) *A nose that glows,* (Touch the nose with the fingers of one or both hands) *My, what a sight!* (Clap the hands together) *A fiery mouth,* (Touch the mouth with the fingers of either or both hands) *With a jolly grin,* (Stretch the mouth into a grin with the fingers of both hands) *No arms, no legs,* (Shake the arms, then the legs) *Just head to chin.* (Put one hand on the top of the head, and the other under the chin)	Music for "The Battle Hymn of the Republic" (no lyrics)

Objective	Learning Experience	Resource
	• Name five parts of the body, and ask the children to touch these parts of their own bodies as you name them. Vary the parts, and have the children take turns as the leader.	"Put Your Hands Up in the Air," from Hap Palmer's *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York), Vol. I: side 1, band 2
	• Play "Tap." Select a leader from among a group of volunteers, and have the other children stand where they can see him. The leader taps one of the parts of his body three times, naming it aloud as he does so (e.g., "Nose, nose, nose"); and the other players follow. Repeat the activity to include a wide variety of body parts, increasing the pace and changing leaders often.	
Objective 23: To utilize selected parts of the body.	• Do arm circles. Have the children stand facing forward, with their arms extended to the sides at shoulder level. Demonstrate backward arm circles, and ask the class to do them with you. Repeat, changing the speed, the size of the circles, or both. Then demonstrate forward arm circles, and have the class do them with you in the manner described above. Let the children take turns leading their classmates in backward and/or forward arm circles of various speeds and sizes.	
	• Play "Body Alphabets." Divide the class into two teams, and explain that each team will be given a word to spell by having the players form the letters with their bodies and then arrange themselves in appropriate fashion to form the word. Demonstrate how some of the letters might be formed, and have the children do them with you. Then assemble one of the teams at the front of the room, show them the word to be spelled, and give each child (or let him choose) a letter to represent. When the team is ready, have the players spell the word with their body alphabets; and ask the other team to identify it. After the players on the second team have named the word, they move to the front of the room and the activity is repeated. Points can be awarded for performance or for identification, as you choose.	"Marching Around the Alphabet," from Hap Palmer's *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. I: side 1, band 5
Objective 41: To identify body gestalt (composite image).	• Play an identification game by describing various parts of the body in the following manner: - I am thinking of *something which is on the end of our arms.* - I am thinking of *something which keeps dirt and things out of our eyes.* - I am thinking of *something which makes our legs bend.* - I am thinking of *something we stand on.* - I am thinking of *something we breathe through.* - I am thinking of *three things which help us to talk.*	

Objective	Learning Experience	Resource
	• Play shadow tag. Select a player to be "It" and have him tag another player by stepping on his shadow. The tagged player is the new "It."	
	• Sing and perform movement songs like the following, with the children taking turns as leader: *My hands upon my head I'll place,* *Upon my shoulders, on my face,* *At my waist, and on my side,* *And then behind me they will hide.* *Now I'll raise them way up high,* *And let my fingers fly, fly, fly.* *Now I'll clap them one, two, three,* *And see how quiet they can be.*	"Put Your Hands Up in the Air," from Hap Palmer's *Learning Basic Skills Through Music* (Educational Activities, Freeport, New York) Vol. I: side 1, band 2

006 MOVIGENICS (Grades K-6)

OBJECTIVES

MUSCULAR STRENGTH: An ability to bring the total muscular system into appropriate and efficient relationship to serve an individual's needs.

1. To demonstrate adequate strength in the neck muscles.
2. To demonstrate adequate strength in the shoulder muscles.
3. To demonstrate adequate strength in the arm muscles.
4. To develop strength in the wrist muscles.
5. To demonstrate adequate strength in the finger muscles.
6. To demonstrate adequate strength in the right and left hand grip.
7. To demonstrate adequate adaptable grip strength.
8. To demonstrate adequate strength in respiratory muscles.
9. To demonstrate adequate strength in back muscles.
10. To demonstrate adequate strength in abdominal muscles.
12. To demonstrate trunk mobility.
13. To demonstrate adequate strength in leg muscles.
14. To demonstrate adequate strength in ankle muscles.
15. To demonstrate adequate strength in leg, foot, and toe grip.
199. To demonstrate adequate strength of knee mobility.

MUSCULAR STRENGTH (Continued)

200. To demonstrate adequate strength of elbow mobility.

DYNAMIC BALANCE: A continual movement or shifting to maintain equilibrium.

16. To demonstrate stationary vertical-upright balance.
17. To demonstrate (continual movement to maintain balance) dynamic vertical-upright balance.
18. To demonstrate stationary vertical-crouch balance.
19. To demonstrate dynamic vertical-crouch balance.
20. To demonstrate dynamic horizontal balance.
21. To demonstrate adaptable balance.

BODY AWARENESS: An individual's composite awareness of his body.

22. To identify selected parts of the body.
23. To utilize selected parts of the body.
24. To identify the right side of the body.
25. To identify the left side of the body.
26. To distinguish between the right side and the left side of the body.
27. To identify the front part of the body.
28. To identify the rear part of the body.
29. To distinguish between the front and the rear of the body.
30. To identify the inside of the body.
31. To identify the outside of the body.
32. To distinguish between the inside and outside of the body.
33. To identify the physical change caused by exercise.
35. To identify physical change associated with interpersonal relations.
38. To identify physical change associated with growth.
39. To identify male and female sexual characteristics.
41. To identify body gestalt (composite image).
42. To utilize the entire body.
43. To identify representations of the body.
156. To identify change in body feelings (perspiration, fatigue, etc.)

SPATIAL AWARENESS: An individual's ability to estimate, measure, and organize space and to live within his environment.

44. To visually identify the location of stationary objects.

SPATIAL AWARENESS (Continued)

45. To visually identify the location of moving objects.
46. To visually identify the location of objects in relation to changing body movements.
47. To avoid objects in a field of space.
48. To identify the location of sensory stimuli in various fields of space.
49. To identify the relationship of a person to a given amount of space.
50. To identify the relationship of objects to a given amount of space.
51. To identify the relationship of people and objects, together in space.
52. To identify the spatial relationship of two-dimensional objects.

RHYTHM: A grace and flow in the general movement patterns of an individual.

53. To identify internal body rhythm.
54. To imitate internal body rhythm.
55. To imitate external rhythmic patterns.
187. To move the body in a synchronized pattern.
188. To move various body parts in a synchronized pattern.
189. To associate movement and tempo beat.
190. To move the body in a coordinated response to music.
191. To reproduce rhythmical sequence using the total body.
193. To define and respond to rhythmic beat using the ears.
194. To reproduce rhythmical sequence using various body parts.
195. To develop timing of movement using alternating hands, feet, arms, and legs.
196. To reproduce and respond to rhythmic patterns simultaneously.
197. To maintain simultaneous rhythmic patterns (arms in one — legs in another).
198. To reproduce rhythmic patterns using body and objects.

TEMPORAL AWARENESS: An awareness of an individual's position in space in relation to time.

56. To explain the difference between night and day.
57. To trace the sequence of day through night.
58. To order a sequence of personally related events from day to night.
59. To differentiate past, present, and future events.
60. To order a series of events chronologically.
62. To maintain performance efficiency through varied time intervals.
63. To identify connotative intervals of time (e.g., a little while, just a moment).

TEMPORAL AWARENESS (Continued)

64. To identify time intervals (i.e., seconds, minutes, hours).
65. To correlate time with fast and slow behavior.

MOTOR PLANNING: It enables man to efficiently institute, develop, initiate, and design his total movement patterns.

71. To use one's own motor abilities most efficiently.
72. To develop planning skills such as an awareness of height, depth, length, solidity, weight, width, total movement in space.
73. To use specific parts of the body for executing specific tasks most efficiently.
74. To control active forces of the body (jumping, stamping, etc.).
75. To control passive forms (strength of the body) in supporting body parts.

AUDITORY MODE: The individual's cognitive awareness of sound in relation to his environment.

207. To develop listening skills.
76. To identify sounds within the child's environment (animal sounds, etc.).
77. To select relevant sounds amidst distraction.
80. To imitate selected sounds.
81. To reproduce varied sounds in sequence.
82. To determine the direction of a sound source.
83. To identify voices.
84. To identify the loudness or softness of sound.
85. To identify the highness or lowness of sound.
86. To identify the relative distance of sound.
87. To follow directions.
88. To recall auditory stimuli (names) of persons, places, or things, etc.
90. To identify para-speech (i.e., laugh, scream, cry).

BILATERALITY: The ability to move about freely in either direction.

91. To use both arms simultaneously.
92. To use both legs simultaneously.
93. To use both eyes simultaneously.
94. To use both ears simultaneously.
96. To demonstrate unity in movement using alternating hands, arms, legs, and feet.
97. To demonstrate unity of movement using both arms and hands together.

BILATERALITY (Continued)

98. To demonstrate unity of movement using both legs and feet together.
99. To refine movement using eyes and arms.
100. To refine movement using eyes and legs.
101. To produce bilateral patterns using eyes and hands, eyes and feet.
102. To produce bilateral patterns using arms and legs.
104. To focus one eye on a stationary object while child is stationary.
105. To focus both eyes on a stationary object while child is stationary.
106. To focus one eye on a stationary object while child is moving.
107. To focus both eyes on a stationary object while child is moving.
109. To track a moving object with both eyes while child is stationary.
110. To track a moving object with one eye while child is moving.
111. To track a moving object with both eyes while child is moving.
114. To steer both eyes in a horizontal direction while child is stationary.
115. To steer both eyes in a horizontal direction while child is moving.
117. To steer both eyes in a vertical direction while child is stationary.
119. To steer both eyes in a vertical direction while child is moving.
121. To shift both eyes from left to right and right to left.
122. To shift both eyes from up to down and down to up.
209. To use both hands and fingers.

VISUAL MODE: The individual's awareness of sight in relation to his environment.

124. To shift one eye from up to down and down to up.
125. To describe visual stimuli in terms of color.
126. To describe visual stimuli in terms of size and shape.
127. To describe visual stimuli in terms of figure-ground relationships.
128. To describe visual stimuli in a gestalt.
130. To adjust vision in varied circumstances (dark glasses, etc.).
133. To identify the location and direction of light.
203. To identify pictures and objects.
204. To imitate action models or pictures.

GUSTATORY MODE: The individual's awareness of taste and all related functions of the digestive tract.

142. To demonstrate tongue mobility.
143. To use teeth, tongue, jaw, etc., in an appropriate manner.

KINESTHETIC MODE: An awareness of movement bringing purpose and direction to muscular contraction for effort.

150. To identify muscles used while performing tasks.
151. To demonstrate gross movement patterning.
152. To demonstrate fine movement patterning.
153. To relax the body.
154. To tense the body.
155. To identify body parts used to elicit movement efficiently.
156. To identify change in body feelings (perspiration, fatigue, etc.).
202. To identify location of known objects without use of visual or auditory perception.

FLEXIBILITY: A change of intensity or direction of movement upon stimulation from one or more of the senses.

157. To stop and/or go upon auditory stimulus.
158. To move quickly or slowly upon auditory stimulus.
159. To change tempo in midst of activity upon auditory stimulus.
160. To change pattern of movement after movement has begun upon auditory stimulus.
161. To stop and/or go upon visual stimulus.
165. To stop and/or go upon tactual stimulus.
169. To adapt to unfamiliar situations (e.g., darkened room, lessons on floor).
170. To change direction of movement upon auditory stimulus.
171. To change direction of movement upon visual stimulus.
173. To change intensity (force) of movement upon auditory stimulus.
174. To change intensity (force) of movement upon visual stimulus.
175. To change intensity (force) of movement upon tactual stimulus.
176. To identify change or difference in various stimulus patterns.
210. To change intensity (force) of movement.
211. To change direction of movement.

TACTUAL MODE: The individual's awareness of touch in relation to his environment.

177. To identify shape of objects by touch.
178. To identify texture of objects by touch.
179. To identify weight of objects by touch.
180. To distinguish hot from cold.
181. To distinguish soft from hard.

TACTUAL MODE (Continued)

182. To distinguish fluid from solid.
183. To distinguish rough from smooth.
184. To match similar materials by touch.
185. To respond when touched on various body parts.
186. To distinguish difference in weight and bulk.

INSTRUCTIONAL VARIABLES

SEX	MENTAL AGE	CHRONOLOGICAL AGE	PHYSICAL HANDICAPS	LEARNING ENVIRONMENT
Not applicable	197. 2-0	224. 3-0	243. Blind	258. Classroom
	198. 2-5	225. 4-0	244. Partially Sighted	259. Outdoors
	199. 3-0	226. 5-0	245. Deaf	260. Gymnasium
	200. 3-5	227. 6-0	246. Hard of Hearing	
	201. 4-0	228. 7-0	247. Gross Motor Disability	
	202. 5-0	229. 8-0	248. Fine Motor Disability	
	203. 6-0	230. 9-0		
	204. 7-0	231. 10-0		
	205. 8-0	232. 11-0		
	206. 9-0	233. 12-0		
	207. 10-0	234. 13-0		
	208. 11-0	235. 14-0		
	209. 12-0	236. 15-0		
	210. 13-0	237. 16-0		
	211. 14-0	238. 17-0		
	212. 15-0	239. 18-0		
	213. 16-0	240. 19-0		
	214. 17-0	241. 20-0		
	215. 18-0	242. 21-0		
	216. 19-0			
	217. 20-0			
	218. Above 20			

Paul H. Winiecki
Orchard Park Junior High School
Baker Road
Orchard Park, New York 14127

PERCEPTUAL-MOTOR DEVELOPMENT

Emotionally Disturbed

UNIT I

Primary

Goal: Developing the ability to recognize and make spatial relationships in a gymnasium situation

Preliminary Note:

The activity described on the following pages might fall into the realm of movement education or perhaps some other category that is apropos or fashionable. The reason I have for using it is that the activity has been successful in a physical education class for primary children. It is more successful with a "normal" class than with children who demonstrate a lot of class-disrupting behavior.

The activity involves planned movements, exercise, thinking, mimetics, and fun.

The question of exactly how it should be taught has been answered in the unit. But sometimes there is a question of how much control you should use, and there is *always* the question of *how* you control. Some physical education classes might look like a disaster to an outsider when things are going just the way the teacher would like them to go. Other classes might appear to be highly organized and quiet, and yet they aren't anything like what the teacher wants. How do you handle a class? Probably the best answer is another question: How do you handle *yourself*? How do you want to be taught? How do you want to be treated? How much patience do you have? What does the class have to be like for you to feel satisfied? This is, of course, an oversimplification. However, each teacher must teach his class in his own way. We may learn from others, but ultimately we must do it in our own way. When we try to do it like somebody else, perhaps someone who is very successful, we may fail because *he* is no longer doing it.

Many of the new teachers come into teaching with much more confidence than I could muster when I was in my early years of teaching, even though the "arrogance of youth" was on my side. These young people are not afraid to try something that they think has merit, even if it doesn't have a perfect track record. This is not to say that experienced teachers are not innovative and effective.

So this is the way I think teaching of any kind, and especially teaching children who are emotionally disturbed, should be approached. You must have confidence in yourself and in what you are trying to do. However, this confidence should be tempered with caution — a caution that will enable you to adapt to your class (i.e., think on your feet, slow down, speed up, change, stop, begin again — anything that seems necessary for the situation).

Objective	Learning Experience	Resource
Several objectives such as the ability to follow directions, the ability to control the body, and others run throughout the entire unit and have not been listed for each specific activity in which these objectives are demonstrated.		
The pupil demonstrates the ability to recognize shapes and colors. He also demonstrates the ability to manipulate his body.	• Ask the children to: - Sit on a straight line. - Stand on a curved line. - Straddle the shortest line they can find. (A line is "shortened" whenever another line crosses it.) - Lie down on a straight line.	Straight or curved lines painted on the gym floor. (If the space contains any permanent pieces of apparatus or some special lines or shapes, these can also be included in the activity.)

Objective	Learning Experience	Resource
	- Put one foot and/or one hand on a line of one type or color, and the other foot and/or hand on a line of another type or color. - Support their bodies with something other than their feet and legs (e.g., one foot and one hand, the back, the stomach, etc.). - Support themselves with one part of the body touching the floor and another part touching something besides the floor.	
The pupil demonstrates the ability to follow simple directions with different signals.	• Ask the children to repeat the activities described above, this time with the accompaniment of music. Have them stop what they're doing and pay attention when the music stops.	Records and a record player
The pupil demonstrates the ability to recognize lines as parts of boundaries.	• Ask the children to find a part of the gym where the lines and/or wall make a path, a circle, or any kind of "fence." Then ask them to make: - A line, with you in front. - A line, with you in back. - A circle, with you in the middle. - A big or a little circle, with you in the middle.	
The pupil demonstrates the ability to make certain types of lines and geometric figures.	• Give each child a skip rope and ask him to make: - A straight line. - A zig-zag line. - A circle. Then have him place the rope: - *On* a straight line. - *On* a bend in the line. - *On* a part of a circle. In almost all of the activities described above, the children can be asked to stand or sit inside or outside the "boundary," to straddle it, to put one foot on one side and the opposite hand on the *same* side of it, etc.	Enough skip ropes so each child may have one.
The pupil demonstrates the ability to work with others in building or putting something together.	• Ask the children to find partners and work in pairs to make the shapes described above (i.e., the line, zigzag, circle, triangle, etc.). Then have them use the ropes to build (make the shape of): - A ranch house, and - A two-story house. Ask each set of partners to combine with another set, making groups of four. Then ask each group to "build" or make the shape of:	

Objective	Learning Experience	Resource
	- A house with two rooms, and - A house with four rooms. At this point, you will have to be careful that each child knows which rope is his, and that the members of the group do not begin to squabble about which part of the house is theirs or which part they want to build.	
The pupil demonstrates an awareness that the size of the items must be reduced in order to get them all in when more complex buildings are being made.	· Ask the children to combine their groups of four into groups of eight. Then ask them to build: - Bigger houses with more rooms or more parts (e.g., a chimney, TV antennae, etc.); - A skyscraper; or - Any building, shape, or figure that is peculiar to the school, the community, or the local geographic area.	
The pupil demonstrates the ability to take things apart in an orderly fashion and then store the materials for use at another time.	· Ask the children to dismantle their buildings from the top down and put their building blocks (the ropes) in a neat pile so they will be able to get their materials easily the next time they want to build a house.	

UNIT II

Primary

Goal: Developing self-control and the ability to move from behaviors required for a game situation to behaviors which are appropriate for real life

Preliminary Note:

Storyplays may seem to be either extremely difficult or very easy activities to conduct. I have found them to be enjoyable experiences for both the children and myself. The particular storyplay that I've included in this unit could be used in "regular" classes with 25-35 students. However, when I used it with emotionally disturbed children, I found that a smaller group was necessary because of potential behavior(s) that could require more individual "attention."

This storyplay has some continuity (i.e., you can pick up in your next class where you left off in the last one). It is therefore an activity you can use with only part of the class remaining; and since the children would already be familiar with it, it would require very little preparation or reorganization. I have always found that stopping to reorganize is somewhat confusing to the children and often leads to discipline problems as well.

One of the more obvious problems in this particular activity is control. The return from imaginative reaction to "the behavior of the moment" is one of the important objectives in this or any other storyplay. If a teacher were to use the same activity in future classes, the children would probably have learned how to fall in and out of "the behavior of the game."

If you use a storyplay in your classes, I feel that you have to involve yourself in it. By this, I mean that your tone of voice must be right for the setting (e.g., slow and quiet, fearful, gay, etc.). You may also have to lead some of the movements that are part of the game. If you do not feel comfortable doing these things, storyplays may be the wrong sort of activity for you to use.

Objective	Learning Experience
The pupil demonstrates an understanding of the limits of the play area.	· Have the children sit in a circle around you. After explaining a little of what you are going to do and why limits are necessary, ask them to take six giant steps straight back from where they are sitting. (If there is a large circle or a natural boundary in your gym, this can be used instead. Your own facilities and experience will dictate what the limits should be.)
The pupil demonstrates the ability to mimic or copy certain kinds of behavior.	Have all the children make faces or body movements that indicate happiness, curiosity, apprehension, and furtiveness. (Whether this part of the game is necessary depends upon your group and its abilities.) Obviously, different expressions would be used if you change or adapt the storyplay described in this unit. Explain what a storyplay is and how it is played. Make sure the children understand that they are going to play all the parts and that they will do everything in their own places (i.e., if they are supposed to run, they will stay right where they are and make their legs and arms pump up and down as if they were running).
The pupil demonstrates the ability to react to tone of voice and the situation of the play.	· Then, with the children sitting or standing in the circle around you, tell them the following story. Remind them that they are to act the story out with you as you tell it. *Last summer when their family went on a vacation at the seashore, Joe and Jane, two kids just about your age, were walking along the beach when they saw a large trunk — almost like a pirate's chest. The chest was wrapped in chains and padlocks, was very rusty and very, very old. The kids dragged the chest onto dry land and tried to figure out how they could get it open.* Have the children imitate pulling the chest onto the beach, and pulling and twisting at it to get it open. Ask them how they would open the chest if they had found it. Use their suggestions to start opening the chest. *Wait a minute! There is a strange sort of humming sound coming from the chest. Almost as if there is something alive in there.* Have the children pretend that they are listening to the sound, with their ears close to the chest. *Well — should they open it or not? Everybody knows that kids are a little bit like little kittens — very curious. But how would they open it up?*
The pupil demonstrates a knowledge of body movements associated with different types of tools.	Ask the children what kinds of tools they might use to get the chest open. Most kids will suggest hammers, etc. Have the children try to open the chest with their tools. You may have to assist them by leading these movements. *As they got the chains and the locks of the chest partially off, the humming sound got louder and louder. Now they were a little bit afraid of what might be in that box, so they lifted the lid ever so little. As soon as they lifted the lid just that little bit, the noise got much louder, so they slammed the lid shut again. In order to see what was inside they would have to open it just a little bit farther — BUT — not far enough for whatever was inside to*

Objective	Learning Experience
	get out. So they opened it just a little bit widerrrrrrr and suddenly slammed it shut, because you know what they saw? They saw a "tickle bug."
	During this part of the story, the kids will be opening the chest, peeking inside, and finally slamming it shut.
	Now just what do you suppose a tickle bug does? This bug can know exactly where you are the most ticklish, and he can get into your clothes so fast to tickle you, you won't even know what happened — EXCEPT — that you will be tickled like you were never tickled before. What do you suppose a tickle bug looks like?
The pupil demonstrates the ability to verbalize what he can imagine.	Have the children volunteer what a tickle bug might look like. Accept their descriptions, and add to them anything that will make the tickle bug more fearful. Make sure that all the kids get into the feeling of the tickle bug and what he looks like. He is really not a BAD bug, but he sure can tickle!
	The next important step is to get the tickle bug out of the box and into the most ticklish spot of the child. ALSO, once he is out of the box, he must be put back in; and the kids will have to be put back into a listening pose.
	Tell the children that if the tickle bug ever gets out of his box, we will put the box on top of him and put a big rock on top of it to hold him in. Then tell them to remember how to get the bug back into the box, because we want to take him to the zoo so ALL the children can see him.
	Put all the chains and all the locks back on so we can carry him safely to the zoo. Try to lift up the box. Remember to lift with your legs, and to keep your back straight up and down, or else you'll hurt it. Boy! That box is too heavy to carry all the way to the zoo. How else can we carry him?
	Ask the children to suggest ways of getting the tickle bug to the zoo. A truck or a large cart will fit into the story very well.
The pupil demonstrates the ability to imitate body movements in a safe manner.	*Lift the box into the truck. Be careful not to drop him — because if we do, you know what will happen. Gee, this is a bumpy road! You don't suppose that the box will jump out, do you? Oh, oh, look out! The box has fallen out of the truck. Quick, stop the truck! We have to go back and find the box. I hope the chains didn't break and the tickle bug got out!*
	Have the children pretend they are walking back down the road, looking for the box along the road and behind the bushes and trees, etc.
	Oh, oh, there's the box — but the tickle bug is not in it! Where do you suppose he is? We'll have to look around for him. I hope he doesn't jump up on me. Look, that bush over there is moving just a little bit, and I think I can hear a humming sound. Do you hear it? We'd better go over and investigate.
	Have the kids creep carefully over toward the imaginary bush. As they get closer, we can hear the humming and are sure the tickle bug is there.
	Be careful now. Get the box ready so we can put it over him just like we

Objective Learning Experience

> *planned. He's over there. It looks like he may be sleeping. Did you ever see such a ticklish looking thing? Be careful. Look out, he's awake! He's coming toward you! I can't get away — he's on me, he's tickling me!*

Here you will probably have to shout to get the attention of the children.

> *Quick, get the box! Put it over him! Get a rock or something to hold it down. I can't find a rock! Quick, sit on the box so he doesn't get away! Oh boy, I'm tired — let's rest.*

After each of the children has the bug under his box, make believe you are very winded from the struggle and are resting on top of your box.

> *Boy, we are lucky that we are heavy enough to hold the bug inside the box. He is REALLY starting to hum now. He is humming so loud that he is making the box rock a little bit. It's starting to rock more and more. Look out, he may get out! The box is rocking so hard that it is hard for me to keep him in. He's out! He's tickling me again!*

Here you will probably have to shout again.

> *Quick! Get the box and put it over him! GOOD. This time we have a rock large enough that when he hums, it still can't make the box rock enough for him to get out. But we have a problem — the top of the box is broken and if we turn it, he will surely get out again. What kind of box can we build so the tickle bug won't get out?*

Have the children make suggestions as to what kind of box we could use to take the bug safely to the zoo. Make sure you have a ready explanation for how the bug might get out of the box (e.g., he could cut a wooden box with his special saw-like tail, or a metal box with a special "heat element" in his tail, etc.).

Pick up the story at any place whenever you choose to in future classes, with the bug under the original chest and the kids looking for a solution to the problem of getting him "safely" to the zoo.

UNIT III

High Primary
Low Intermediate

Goal: Developing side opposite skills

Preliminary Note:

A good many of our everyday movements, as well as many sports or physical education activities, are centered on the ability to move one side of the body backward or forward when the other side is moving in the opposite direction. This "side opposite" motion is the subject of the following material.

While this movement is natural to many children, it can be a difficult skill for others to acquire. Any degree of success in "ball-type" games might easily be predicted by the child's proficiency in side opposite motion. For this reason, some practice and teaching should be directed at this skill.

How should the material in this unit be taught? Probably the easiest method is to fit it into any activity where this type of movement is necessary. It could be presented as an entity in itself, for a short period of time; but since drill becomes tedious to children unless it is presented in a palatable form, this type of activity could cause problems. It might better be used in game, or even relay form.

Objective	Learning Experience	Resource
The pupil demonstrates an awareness of the fact that side opposite motion is integral to smooth body movement.	• Have the children walk toward you from a short distance away. Ask them to notice which arm swings forward when either of their legs moves forward. Repeat the activity, this time having the children *run* rather than walk. Then ask them to walk toward you with the right arm moving forward as they step on the right foot, and the left arm moving forward as they step on the left foot. Repeat, having the children run with the arm and leg on the same side of the body moving together as they come toward you. Ask the children which method seems easier or more natural for them. Point out that proper methods of throwing, kicking, and rolling a ball require the same type of side opposite coordination.	
The pupil demonstrates the ability to roll or bowl a ball with side opposite rhythm.	• Have each of the children stand with a softball-sized ball in his dominant hand, step forward with the opposite leg, and flex the knee of that leg enough to allow the dominant hand to swing low, "lay" the ball down, and roll it straight ahead. If a child seems to be having a great deal of trouble in picking up the coordination, ask him to follow a 2-count motion such as this: - On the count of 1, swing the dominant arm backward and step forward on the opposite leg, almost simultaneously. - On the count of 2, bring the weight and the dominant arm forward to roll the ball down the floor.	A supply of softball-sized balls
The pupil demonstrates the ability to roll a ball with the proper motion. He also demonstrates the ability to control the direction of the ball he rolls.	• Have the children repeat the motion, this time rolling a ball down a straight line. Then ask them to: - Roll the ball down a painted line and hit a ball or a pin on that line. - Roll the ball down the floor and try to hit a pin that is *not* on a drawn or painted line. - Roll the ball at a pin a foot or two to the right and/or left of a center pin. Point out that, although the *motion* of the throw is the same, the thrower must continually reposition his body so that he is in line with his target.	Duck pins or extra balls

Objective	Learning Experience	Resource
	Have the children compete with themselves or with their classmates, using a scoring system based on points given for hitting the pins they are instructed to hit. A penalty may be assessed or no score given if the wrong pin is hit.	
The pupil demonstrates the ability to move on to more difficult, but related skills.	• Ask the children to roll the ball: - Through a long lane of pins. - Through a tunnel formed by other children in a straddle position. The extra length in these attempts will require the children to use more speed or strength, and they will need to develop the ability to control this extra speed.	
The pupil demonstrates the ability to spin and curve a rolled ball.	• Using inflated balls that are small enough to hold in the palm of the hand, ask the children to put a spin on the ball by lifting and "twisting" the hand and wrist as they roll the ball. Have the more advanced achievers attempt to curve the ball around a blocking pin halfway down the floor, in order to hit another pin some distance behind the blocking pin.	
The pupil demonstrates the ability to kick a ball with proper side opposite motion.	• Have each of the children: - Stand one step away from a ball sitting on the floor, - Step forward with one foot, and - Kick the ball with the other.	
The pupil demonstrates the ability to "time" his body movement so that he can kick the ball properly.	• Ask each of the children to: - Run forward and kick a ball that is lying on the floor. - Run forward and kick a ball that is rolled along the floor toward him.	
The pupil demonstrates the ability to control the strength of his kick.	• Ask each child to kick a ball into a target area which is only a short distance away. Then have him kick the ball against the opposite wall with enough strength to make the ball come all the way back to him.	
The pupil demonstrates the ability to use side opposite motion in throwing a ball underhand.	• Have the children repeat the movements used in rolling a ball, but bending the leading knee a little less and releasing the ball at a level "just below the pocket."	
	• Have the children toss the ball into target areas quite near or quite far away. Then ask them to toss the ball into a target area that is like the strike zone of baseball and softball.	

Objective	Learning Experience	Resource
The pupil demonstrates an understanding of the side opposite motions of running.	· Have one child at a time run directly toward you. Emphasize side opposite motion (which is natural in almost all kids). Then demonstrate that certain motions hinder running. - Ask the children to run naturally, and then ask them to run with exaggerated rotations of the upper trunk. - Ask the children to run naturally, and then ask them to run with their arms crossing all the way across their body. In each of the above cases, ask the children which movement is easier. * * * * * Since there are many more instances of side opposite movement than those suggested here, a variety of useful activities can be developed for other aspects of the skill.	

Elizabeth Polk
Registered Dance Therapist and Assistant Professor at Adelphi University
39-48 46th Street
Sunnyside, New York 11104

PERCEPTUAL-MOTOR DEVELOPMENT

Emotionally Disturbed
Learning Disabilities
Brain Injured

Primary
Intermediate

UNIT I

Goal: Developing body awareness (body image)

Preliminary Notes

In working with special children, one has to bear the following in mind: *We must reach them where they are.*

Everyone is familiar with the saying, "Know thyself." Special children need this knowledge in an even broader sense. To them, "Know thyself" also means "Know your body." That is why we have to help them with body awareness, or what is called "body image."

A. Everyone likes to be called by his name, and the special child is no different. By calling and using the child's name, you will get his attention and teach him to listen.

B. Everyone knows the saying, "A picture is worth a thousand words." Using marionettes and paper skeletons makes the lesson enjoyable for the child, because children love to watch and copy the marionettes. It is important to realize that *without joyful attention, there can only be a poor learning experience.*

C. Using balloons helps to achieve joyful attention. Another reason for using them is to prepare the child for ballplaying. Balloons help the child to focus. As they float high up in the air, the child lifts his eyes and his head to watch the balloons. Many children have to be taught to look up. This exercise helps to teach them better posture.

D. Singing and moving come naturally to children. Singing and moving with an action song should be natural, even for special children.

E. A physical education teacher does more than teach physical education: he also teaches body awareness. As the muscles of the different parts of his body are strengthened, the child's endurance span lengthens. He gains an increased knowledge of his body, and this knowledge gives him security. It helps to reduce his various fears. You must be subtle in aiding the child to overcome his anxieties. As the child unconsciously stoops to pick up balloons, his fear of bending down gradually subsides Never force an exercise like the bear walk until the child is ready.

Musical accompaniment to movement serves many purposes. It tells the entire class when to start and when to end. Music encourages listening, and the beat dictates a rhythmical performance. Music establishes a certain mood and transports the listener. Music takes the effort out of movement, and gives a lift. Music and rhythmic movement belong together.

Objective	Learning Experience	Resource
The pupil demonstrates the ability to identify various parts of his body.	A. With the children sitting in a circle on the floor, say your first name aloud (e.g., E-li-za-beth), and clap your hands in the rhythm of the name. Have the children repeat your name and clap their hands accordingly. Then let each child say his own name and clap its rhythm in the same manner. Encourage the children to find different ways of responding to the rhythm (e.g., beating the floor, clapping their feet together, stamping their feet on the floor, snapping their fingers).	

Objective	Learning Experience	Resource
	Use the name rhythms to help the children to identify various parts of their bodies. Ask a question like "What else can we beat to say (E-li-za-beth)?" Then have one of the children suggest a part of the body on which to tap *his* name, and have all the children say his name aloud and tap the body part that he selected. Repeat the activity, remembering that each child's name is his identity. Using it as part of the game encourages him to listen and participate. Have the children stand up and repeat the exercise described above, tapping their backsides and hips, bending down to touch their feet, etc. Then repeat the activity with the children lying on their backs. Have them tap their heads, faces, shoulders, chests, stomachs, thighs, knees, legs, feet, toes — in and out of sequence, but always using the name rhythms. Because the children can't see each other when they lie on the floor, you will have to direct them, thus forcing a sit-up exercise. Make them lie down again, speeding up your instructions to make the activity more fun.	
The pupil demonstrates the ability to identify and move various joints in his body.	B. With the children sitting in a circle, introduce a "surprise." Show them a paper skeleton from Halloween (or a marionette). Manipulate the skeleton to show its various joints. Then have the children stand up and follow your directions as you manipulate the corresponding joints of the skeleton: *At the elbow, bend and stretch your arm.* *At the knee, bend and stretch your leg.* *At the ankle, flex and stretch your foot.* Encourage the children to copy the movements of the skeleton, and then discard it. Standing in the circle formed by the children, pretend to be a live skeleton and have the children do the movements with you. Then let each child take his turn in the center and create new skeleton movements. Have the other children follow the leader.	A paper skeleton or marionette
The pupil demonstrates the ability to move parts of his body in relation to an object.	C. From a variety of colored balloons, have the children select the ones they want by identifying the color in each case. Let them play with the balloons, tossing them about and catching them to the accompaniment of music. Gradually encourage them to toss the balloons and bounce them back from various parts of their bodies (e.g., the head, shoulder, elbow, knee, hand, foot, backside). In contrast with the lively rhythms used above, play a calming selection such as a waltz. Have each child balance a balloon in the palm of one hand and then lift his hand into the air, letting the balloon roll down his arm, over his shoulder, behind his neck, and along the upper surface of his other arm. Repeat the activity, this time starting with the other hand. Encourage the children to experiment with the balloons on other parts of their bodies, perhaps in response to the mood and/or	A variety of colored balloons A lively tune such as "So What's New" from *Your Own Thing* (Hoctor Records) HLP-4089, side 1, band 1 "Waltz in A Flat," from Elizabeth Polk's *Orchestrated Music for Special Children — Popular and Folk Tunes for Dancing and Rhythmic Movements* (Hoctor Records) Vol. I, HLP-4074, side 2, band 9

Objective	Learning Experience	Resource
	rhythms of the music. For example, the pupil might let the balloon roll down his chest, over his stomach, and down his leg.	
The pupil demonstrates the ability to move selected parts of his body in response to the directions in an action song.	D. Sit down with the children seated around you and ask them to watch and listen as you demonstrate the movements in "A Visit to My Little Friend": - Moving *thumbs* - Moving thumbs and *fingers* - Moving thumbs and fingers and *hands* - Moving thumbs, fingers, hands, and *arms* . . . Stand up and continue with: - Moving thumbs, fingers, hands, arms, and *head* - Moving thumbs, fingers, hands, arms, head, and *feet* Encourage the children to follow the instructions on the record, and sing together. The song can also be used to review what the children have learned so far. For example, you might ask them, "Which parts of the body did the song tell us to move?" After they've answered correctly, ask them, "Do you know any *other* parts of the body that you can move?" As they volunteer the answers, encourage them to improvise movements for these parts as well.	"A Visit to My Little Friend" (The Children's Record Guild) CRG-1017, side 2
The pupil demonstrates increased flexibility and coordination in the use of his body.	E. Have the children stand in circle formation (this enables them to see each other), with enough space on either side to allow for freedom of movement. Then demonstrate and conduct a series of flexibility exercises like the following: For arms — The *propeller* (swing outstretched arms in large circles — first forward, then backward) For legs — The *Jack-in-the-box* (do a partial deep kneebend, followed by a quick jump upwards) For the whole body — The *bear walk* (walk on all fours, like a bear) In choosing appropriate exercises, be sensitive to the nature and degree of the child's fears. For example, it is better not to use the bear walk with children who are afraid of bending down until their anxieties have lessened considerably through experiences like those with balloons described on the preceding page. Ask the children to kneel in a circle, facing center, and then to lie down on their stomachs with their arms stretched toward the center and their legs toward the circumference. In this position, have them do a series of stretching and strengthening exercises such as the following:	An appropriate recording such as *Developmental Exercises*, Grades 1 & 2 (Hoctor Records) HLP-4032

Objective	Learning Experience	Resource
	- Hold a balloon or a large ball in front of each child, encouraging him to look up and grab it with *both* hands. As he reaches for the object in this manner, he will use both arms and legs, and therefore stretch completely from fingers to toes. - Then have the children place their hands flat on the floor, palms down beneath their shoulders and — holding their elbows close to their sides — do increasingly difficult types of modified pushups. Then ask the children to lie on their backs with their heads toward the center of the circle and their feet toward the circumference. In this position, lead them in such stretching and strengthening exercises as alternating leg kicks and bicycle pedaling.	Balloons or a large ball

UNIT II

Goal: Improving body orientation in space

Preliminary Notes:

Laterality and *directionality* are needed in our left- and right-oriented society. This is particularly evident in learning to read and write, an area in which special children often experience difficulty. It is therefore important that we help the child to distinguish between left and right, to determine his position in space in relation to his surroundings, and to perceive the relationship between objects in space.

A. Walking in a straight line from wall to wall is not easy. It becomes easier if the child can hold hands with a partner. The challenge of moving backward is less frightening if he can focus on another person.

This exercise assumes that children do not resist touching one another or being touched. If there is resistance to handholding, have the partners hold the ends of a scarf or handkerchief, or parts of a hoop.

B. The children have a sense of anticipation as they await their turn to join the marchers. They feel a sense of accomplishment in marching in a straight line together.

C. Hoop throwing is not just for fun. The partners have to watch each other, and relate to each other. They have to judge the distance of their toss. As they learn to hold and release the hoop with the right hand as well as the left, their laterality improves. In addition, focused throwing prepares the children for sports.

D. It is difficult to walk sideways on the balance beam; but the activity reinforces the concept of left and right, and strengthens lateral movement.

E. An obstacle course presents innumerable challenges and serves to develop mental and physical flexibility. If equipment is not available, use your imagination and arrange a creative obstacle course. Have the children move on lines on the floor; crawl under improvised bridges (made by tall children bending over, or two children forming an arch); walk around each other; step over crouched bodies; etc.

Both the obstacle course and limbo are good for *perceptual motor training*. As they dance the limbo, the children have to focus their eyes and attention on the rope. The younger children love to crawl and wiggle under the low rope; while the older ones, especially the boys, are challenged to try the limbo step which strengthens their thigh muscles.

F. Special children need to "Love thy neighbor as thyself" as much as anyone else does. In this respect, they are not "special" at all. Many of us have a hard time getting along with each other and therefore need social adjustment. Folkdancing is a happy means to this happy end. In "Bingo," the children learn to hug each other while practicing the differentiation between their right and left hands. If you dance with a little partner and hug him, it may have a lasting emotional effect on the youngster.

All children enjoy building a pyramid. The pyramid not only illustrates spatial relationships, but also *human* relationships as well, because it requires cooperative effort. The base row must support the second layer, and the children on top must be careful not to hurt those beneath them. All must work together to build.

Objective	Learning Experience	Resource
The pupil demonstrates the ability to move directionally by walking in a straight line.	A. Choose one child as a partner to demonstrate partnering. Look straight into his eyes, and have him look into yours, as you hold both his hands. Have the other children choose partners of their own. Encourage them to experiment with a variety of ways of holding each other with one or both hands.	
	Having enabled each child to establish who his partner is, line all the children up against the wall. One partner steps out to face the other – the first facing the wall, the second with his back to the wall. Holding hands, one child walks backward as his partner walks forward, to the accompanying music. When they reach the opposite wall of the room, they reverse roles – the other child walking backward, and his partner walking forward. The activity continues in this manner until the music ends.	"Teddy Bear's Picnic," from Elizabeth Polk's *Orchestrated Music for Special Children* (Hoctor Records), Vol. I, HLP-4074
	Repeat the exercise without musical accompaniment. Help the children increase the tempo until they end up running backward and forward. You can accompany them with a drum beat, if you choose.	Drum (optional)
The pupil demonstrates the ability to walk with his classmates in a straight line.	B. Have the children sit in a row, preferably on chairs. Then, to the sound of march music, have the first child in the row get up from his chair and march straight ahead, turning back at the end of the musical phrase. When he reaches his chair, the next child joins him and together they march forward until the end of the phrase. At this point, they turn and march back to the row, where they are joined by a third child, etc. The performance is repeated until the whole row marches together. At the end, they all sit down. By word and demonstration, encourage them to lift their feet and raise their knees as they march to the rhythms.	A row of chairs "The Yellow Rose of Texas," from Elizabeth Polk's *Orchestrated Music for Special Children* (Hoctor Records) Vol. I, HLP-4074
The pupil demonstrates the ability to distinguish right from left by consciously using his left and his right hand (laterality).	C. Tie a colored ribbon to the child's left wrist. Explain that many people wear a wristwatch or a bracelet on their *left* wrist. The ribbon acts as a constant reminder to the child of his left side.	Colored ribbon, or crepe paper streamers
	Distribute hoops, and allow the children ample time to experiment with them. Then ask each child to choose a partner. Give one hoop to each	Hoops

Objective	Learning Experience	Resource
	couple and have the partners in each pair stand in two rows, facing each other, about 5' apart. Holding the hoop vertically in his *right* hand, one of the partners swings it forward, backward, and forward again in time with the music, and then throws it across to the other partner who catches it with his *left* hand. The second child swings the hoop and returns it with his left hand. The partner catches it with his right, and so the game goes. Halfway through the music, have the partners change roles, each one swinging the hoop with his other hand.	"Varsoviana," from Elizabeth Polk's *Orchestrated Music fo* *Special Children* (Hoctor Records) Vol. I, HLP-4074
	Give each couple *two* hoops. Have one of the partners hold a hoop in each hand and then swing and throw both hoops simultaneously to the other, who catches one in each hand and returns them in the same manner.	Hoops "Varsoviana"
	Then ask each of the partners in a pair to hold one of the hoops in his right hand. As the music plays, have each child swing his hoop and throw it to his partner, catching the one he receives from him in his *left* hand. He returns it with the same hand and catches the other hoop with his *right*. The action continues with each child throwing one hoop and catching the other with alternate hands.	Hoops "Varsoviana"
	There are many singing games (e.g., the "Hokey Pokey") that can be used as exercises to reinforce the concepts of left and right.	
The pupil demonstrates the ability to move sideways.	D. To the accompaniment of "Children's Polka," have each child walk on a balance beam sideways to the right, facing forward, without crossing his feet. (You may have to assist him.) When he reaches the end of the beam, he jumps off and the next child starts, thereby establishing directionality to the right.	A balance beam "Children's Polka" (Hoctor Records), HLP-4026
	Repeat the exercise without the balance beam, using a line drawn on the floor instead. Have each child walk to the right until he reaches the end of the line, and then to the left – in time with the music. As he moves with the music, he will develop a sideward slide.	"Children's Polka"
The pupil demonstrates the ability to change his position in space by moving in relation to different objects (directionality).	E. Create an obstacle course from play equipment and then work with each child individually, encouraging him to navigate the course with such instructions as "Walk *forward*. Walk *sideward*. Walk *backward*. Walk *on* the beam. Climb *up* the ladder. Climb *down* the ladder. Crawl *under* the table. Step *over* the rope. Go *around* the chair. Go *through* the hoops." Repeat your instructions as the children move from one obstacle to another along the course. Increasing the speed of the exercise makes it more fun. Continue the activity until the following concepts are thoroughly understood: *up, down, under, over, around, through, forward, backward,* and *sideward*.	Play equipment arranged as an obstacle course. Suggested items include: balance beam, ladder, steps, jungle gym, table, chair, rope, hoops
	Reinforce the concept of *under* by having the children dance the limbo. Ask another adult to help you to hold a long rope high enough for the children to pass under it without stooping. Then play a recording of	A long rope "Limbo Rock" (G. A. Challeng 45-754)

Objective	Learning Experience	Resource
	"Limbo Rock" and have the children walk in a big circle under the rope, around you, and under the rope again. Make sure that each *looks at the rope* as he passes under it. Gradually lower the rope and have the children lean back, push their knees forward, and look up at it as they pass under. Ultimately, they must balance themselves on their hands as well as their feet in order to crawl or wiggle under the rope.	
	With the rope almost on the floor, reinforce the concept of *over* by having the children step over the rope at various levels as you and another adult gradually lift it higher.	A long rope
The pupil demonstrates the ability to change his position in space in relation to other people.	F. Have the children do a simple folk dance to the music of "Bingo." Ask each child to choose a partner and then have the partners hold hands as they walk or skip around the room, singing "There was a farmer who had a dog, and Bingo was his name" twice to the music. On the line "B-I-N-G-O, B-I-N-G-O, B-I-N-G-O, and Bingo was his name," the partners turn to face each other, hold both hands, and skip or move around in a small circle. On the sustained sound of "B" they stand still and shake each other's right hand. On the "I" they shake left hands; on the "N" they shake right hands; and on the "G," left hands. On the "O" they hug each other, and then the whole dance is repeated.	"Bingo," from Elizabeth Polk's *Orchestrated Music for Special Children* (Hocto Records), Vol. I, HLP-4074
	Have the children build human pyramids. Ask them to kneel down with their hands on the floor in a modified pushup position (cf. Unit I — E). Determine which children have the strongest backs by pressing on their spines, and then select three of them to form the base of the pyramid. Have them kneel in a row so that two children can form a second layer by kneeling on their backs. Then let a child who seems to weigh less than the others climb to the top of the pyramid and balance himself in that position. All of the children in the structure must balance themselves carefully and coordinate their movements in order to hold the pyramid together. If the children can't build more than two layers, stand behind them in the center so that your head and raised arms can serve as the top.	

UNIT III

Goal: Improving total motor coordination

Preliminary Notes

Motor coordination is a complex subject, particularly when it involves the entire body (gross motor coordination).

A. Balance is necessary in performing any movement. For special children, however, balancing exercises may become tiresome; and it helps to interrupt the activity with running.

B. Juggling balloons has not been included as an exercise to train circus performers. It is intended to improve eye movement. The child learns to move quickly around the room — up, down, and to the sides — while focusing on the balloons.

Throwing balloons through hoops prepares the future ballplayer to aim and catch. Balloons are ideal fun instruments for any kind of visual-motor coordination training.

C. Coordinating arm and leg movements helps the child in walking, running, leaping, jumping, and skipping — all of which are important for subsequent participation in sports.

The train game helps in other problem areas, too. By waiting and being ready for the moment of changing chairs, the child develops a sense of anticipation.

D. Playing train is probably the best introduction to locomotor movement. The child naturally develops the ability to move his arms in opposition to his legs, and this serves as partial preparation for skipping.

Children who have difficulty in learning to skip usually have one leg that is weaker than the other. As skipping is a step-and-hop movement, you will have to use your imagination in finding new ways to coax the child to hop on the weaker leg. Have patience, because it may take years for some children to learn how to skip.

E. The somersault is a wonderful flexibility exercise, but the child has to overcome the fear of bending down in order to do it. If you stand behind him and playfully look between his legs at him, you may help to relieve his anxiety.

The falling/lying/jumping-up exercise will be fun only if the child has conquered his fear of the floor. Have the children use the mat to lie on, to rest on, or when relaxing. This will help them to feel comfortable on the floor.

In working with special children, you will need more than the usual amount of patience. There are no shortcuts to quick results. But it is rewarding to know that the progress made by a child in physical education will show in his other studies. Combining rhythm, physical education, and perceptual-motor training will enable you to reach him for academic learning.

Objective	Learning Experience	Resource
The pupil demonstrates muscle coordination by balancing.	A. Play prerecorded running music and then stop it suddenly. After a long pause, play it again and stop it again. Ask the children to respond by running when the music plays; stopping when it stops; and balancing on any two supports (e.g., standing on tiptoe, balancing on one foot and one hand, or kneeling on both knees) during the pause. Vary the exercise by having the children balance on one support only (e.g., on the buttocks with arms and legs in the air, on one foot, or on one knee). Encourage them to find new ways of balancing.	"Town Without Pity" (Hoctor Records), HLP-4089, side 2
The pupil demonstrates visual-motor coordination.	B. Give each child two balloons and let him stand wherever he chooses, with ample space around him for activity. Then have the children try to juggle their balloons. So long as they focus both their eyes and their attention on the balloons, they will succeed. Ask three children to stand one behind another with approximately 5' between each pair. Have each of the three hold a hoop out to the right, as high as he can; and then give a balloon to each of the other children in the class. One by one, have each child throw his balloon through the first hoop, run and catch it on the other side, and repeat	Balloons "What Now My Love" (Hoctor Records), HLP-4089, side 2 Hoops Balloons

Objective	Learning Experience	Resource
	the activity with the second and third hoops. When all of the children have had a turn, select three new hoop holders and give the first three an opportunity to perform.	
	Make sure that each child has a balloon, and then hold a hoop as high as you can — like the rim of a basket in basketball. Ask the children to line up one behind another and then have each child run up, throw his balloon into the hoop as though he were shooting a basket, catch it, and run back to the end of the line. This exercise forces the children to stretch and jump.	Hoop Balloons
The pupil demonstrates coordinated arm and leg movements.	C. Place chairs in a row, one behind another, about an arm's length apart. Then have the children sit in the chairs like people on a train, the first one being the engineer. Ask them to listen carefully as you play the following song:	"Down by the Station," from *Children's Song Book* (Mother Goose Records), MGLP 107 Chairs
	Down by the station, down by the station, *Hear the whistle blow.* *Down by the station, ask Information* *Where you want to go.*	
	Down by the station, down by the station, *There goes the engineer.* *Down by the station, down by the station,* *This is what you hear:*	
	REFRAIN:	
	Toot, toot, toot goes the whistle! *Clang, clang, clang goes the bell!* *There's a clickety-clack on the railroad track.* *Listen to the whistle blow, blow, blow,* *Listen to the whistle blow.*	
	Led by their "engineer," have the children make wheels in rhythm with the song by moving their legs as though they were riding bicycles and coordinating the activity with forward arm movements. Then have them interpret the refrain by:	
	- Pulling the whistle cord with one hand; - Shaking their heads to clang like a bell; and - Clapping their hands for the railroad track, combining the action (if possible) with opening and closing their extended legs.	
	On the last word of the refrain, have the children move forward one seat, the engineer running to the end of the row and sitting in the last chair. Repeat the activity until everyone in the class has had a chance to be the engineer.	

Objective	Learning Experience	Resource
The pupil demonstrates coordinated arm and leg movements in locomotion.	D. Vary the game described above by making it a locomotor exercise. Discard the chairs, and have the children line up in train formation, an arm's length apart. Then play the recording and have the children leap around the room, making wheel movements with their arms. On the refrain, have them stand still and interpret the lines as before.	"Down by the Station"
	Place colored hoops in a row on the floor and have the children move in and out of them in response to the music, experimenting with different steps.	"Alley Cat," from Elizabeth Polk's *Orchestrated Music for Special Children* (Hoctor Records) HLP-4074 Colored hoops
	Then ask the children to line up on the left side of the row of hoops. Have them progress from one to another by hopping twice on the left foot *outside* the hoop, twice on the right foot *inside* the hoop, then twice on the left foot outside the next, etc. If possible, have the children accompany their hops by shaking maracas or tambourines.	Same as above Maracas or tambourines
	Have the children respond to music by skipping around the room. As their skipping improves, they will learn to swing their arms in opposition to their legs.	"Off To See the Wizard" (Golden Record R 50A), 78 rpm.
The pupil demonstrates coordinated movements of the whole body (gross motor coordination).	E. Show the children how to do a somersault or forward roll. Then stand behind each child and encourage him to: - Squat with his hands on the mat; - Push hard, as in a pushup; - Pull his chin to his chest; and - Look at you between his knees.	A thick mat
	After the children have achieved this preparatory position, line them up behind a mat. Then kneel beside the mat and help one child after another to assume the proper position, roll forward in a somersault, jump up, and walk off the mat to the end of the line.	
	Beat an even walking rhythm on a drum; then stop with an accentuated beat, and pause. Do it again, and then have the children respond by walking in time with the rhythm, falling to the floor on the accentuated beat, and remaining there during the pause. When the beat resumes, they jump up and repeat the activity.	A drum
	Vary the exercise by speeding up the tempo and shortening the pause. The children will respond by moving, falling, and jumping up more quickly.	

Charles A. Aliberto
Director, ESEA, Title I Gross Motor Development
Program in Reading and Physical Education
Dover Union Free School District #2
Dover Plains, New York 12522

PERCEPTUAL-MOTOR DEVELOPMENT

Learning Disabilities
Primary
Intermediate

UNIT I

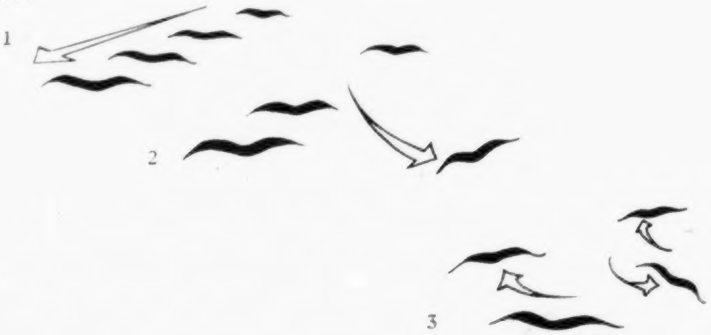
Goal: Enhancing the visual modality: symbolization and prereading skills

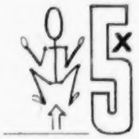
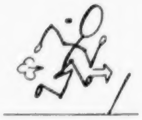
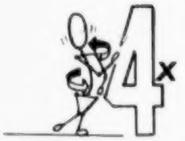
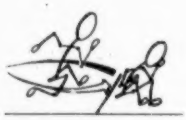
Preliminary Note

Because so much of our sensory input comes through the visual modality, we often take our seeing for granted and are generally unaware of discrete visual clues in our perceptual patterns. This unconsciousness of behavior is unimportant so long as the patterns work for us; but children with perceptual-motor difficulties need training in the visual modality in order to distinguish the specific from the general, the figure from the ground, etc. The following suggestions are designed to help the child to focus his attention upon visual clues, to interpret them, and then to use these abilities in reading.

Objective	Learning Experience	Resource
The pupil demonstrates the ability to focus his attention upon visual clues.	• Explain to the class that they are to perform whatever movement is suggested by gestures, lip movements, and/or items in transparencies projected on the wall or screen. Emphasize the fact that they must watch very closely, because no sound clues will be given; and remind them to move only on a color-coded *GO* signal and to stop immediately after the signal to stop has been given. The stop-and-go signal can be made from a 4"x6" card stapled between two tongue depressors. One side might be colored green and labeled *GO*; the other, colored red and labeled *STOP*. Bringing the signal down in front of you and then turning (or not turning) it in your hand as you flip it up for the children to interpret adds an element of excitement and draws their attention to it.	*The Slow Learner in the Classroom*, by Newell C. Kephart (Columbus, Ohio: Charles E. Merrill Books, 1960) *The Purdue Perceptual-Motor Survey*, by Eugene G. Roach and Newell C. Kephart (Columbus, Ohio: Charles E. Merrill Books, 1966). Inc. 7 "visual achievement form-cards" in a pocket. Color-coded *STOP* and *GO* signals, with the words printed on them
The pupil demonstrates the ability to interpret visual clues.	• Use demonstrations, gestures, and lip movements to suggest such actions as standing, sitting, turning, sidestepping, hopping, jumping, leaping, skipping, galloping, etc. As in the exercise above, have the children translate the visual clues into movement, beginning only when a signal to go has been given and stopping immediately after a signal to stop. Eliminate demonstrations, and repeat the activity with gestures and lip movements only. Then eliminate gestures, and repeat the activity with lip movements as the only visual clues.	
The pupil demonstrates the ability to interpret visual clues in sequence.	• Using gestures, lip movements, and (if necessary) demonstrations, have the children interpret an entire sequence of activity. Remind them to wait for the *GO* signal.	

Objective	Learning Experience	Resource
	Develop simple sequences at first (e.g., "stand up, turn around three times, sit down"). Gradually increase the level of difficulty. Repeat the simple movement sequences, using as little demonstration and/or gesture as possible.	
The pupil demonstrates the ability to focus upon and interpret varied combinations of visual clues.	· Combine demonstrations, gestures, and lip movements in a sequence such as the following: - Through *demonstration*, indicate that the children should run to a given line. - Through *gesture*, indicate that they should spin around counterclockwise five times. - Through *lip movement*, indicate that they are to skip backward to their places. Make sure your demonstrations, gestures, and lip movements are exaggerated at first.	
The pupil demonstrates the ability to interpret movements from large symbols.	· Construct an oaktag man in such a way that it can be moved at all the major joints of its body. Then, using an overhead projector, project an image of the man on the wall or screen and have the children mirror what they see as you move the figure's limbs and bend its joints.	An adaptation of Follett's "Movable Melvin" An overhead projector
The pupil demonstrates the ability to interpret both the movements from large symbols and the directions of those movements.	· Still using the overhead projector, move the oaktag man vertically and horizontally and have the children mirror its movements. In this case, they would stand up or lie down, accordingly. Move just the arms and the legs of the oaktag man, again having the children mirror its movements. Then move head, arm, and leg combinations vertically and horizontally. *N.B.* Predrawn body positions on acetate are not recommended at this point. Since the objective of the activity is to have the children move *as the oaktag man moves*, static diagrams are inappropriate.	*Enriching Perception and Cognition*, Vol. 2 of the *Perceptual-Motor Curriculum* by Ray H. Barsch (Seattle: Special Child Publications, Inc., 1968) (Also, see the selected resource listing immediately following Unit III.)
	· Using a greasepencil on clear acetate transparencies so the children can see what you draw through its image projected on the wall or screen, draw a line and ask the class to identify the position and/or direction it suggests. In the same fashion, draw other abstract symbols and have the children attempt to interpret them until they agree upon the movements suggested by particular symbols. Then arrange these in sequence, and have the class perform the movements as arranged. Finally, combine the sequence, the individual symbols, the oaktag man, and the stop-and-go sign in progressively more difficult patterns and have the children follow these "directions" by moving as the items suggest. At this point, predrawn positions and sequences can be used.	An overhead projector, acetate sheets, and a grease pencil *The Frostig Program for the Development of Visual Perception: Teacher's Guide*, by Marianne Frostig and David Horne (Chicago: Follett Publishing Company, in collaboration with Curriculu Materials Laboratories, 1964

Objective	Learning Experience	Resource
		Enriching Perception and Cognition, Vol. 2 of the *Perceptual-Motor Curriculum* by Ray H. Barsch (Seattle: Special Child Publications, Inc., 1968)
The pupil demonstrates the ability to cooperate with his peers in the interpretation of symbols.	• Using acetate sheets, a greasepencil, and an overhead projector, draw a series of abstract symbols for body positions and ask the children to interpret them. Encourage the children to create some of the symbols and then take turns in drawing them at the projector. Progress from abstract symbols to specific shapes and forms by having the children move in directions indicated by arrows or form letters of the alphabet with their bodies (e.g., A, a, C, D, n, V). Remember to give *visual* directions only — don't verbalize. • Using greasepencil drawings or two oaktag men, suggest positions which involve partners (e.g., sitting side-by-side or back-to-back; one standing, the other lying down). Then add movement. For example, the two figures might spin around each other; one might bob up as the other goes down; or one might hop into a circle as the other hops out. • Increase the number of movement symbols from pairs to groups by drawing a series of cars, trains, birds, etc. Have the children identify themselves with the symbols and interpret them as a group, at first; then encourage one or another to identify himself as an individual within the group by changing his movement as the entire group is moving. *Example:* 	
The pupil demonstrates the ability to relate abstract symbols for movement to	• From this beginning, work toward combining language symbols with the movement symbols until the children begin to *read* directions, separately and in sequence.	

Objective	Learning Experience	Resource
language symbols for the same movements (i.e., to begin to read directions).	*Example:*  Jump five times  Run to the line  Spin around four times  Return and sit Then create a sentence from the sequence of items, and have the children follow directions given in verbal, rather than graphic or verbal/graphic form. *Example:* Jump five times, run to the line, spin around four times, return and sit. For children who can already read, the entire lesson can be done with written or prewritten directions. Encourage the children to work *with* you as you develop the materials and activities described in this unit.	

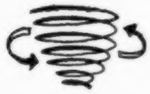
UNIT II

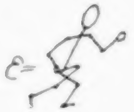
Goal: Enhancing the auditory modality: sound discrimination and rhythm

Preliminary Note

It is an accepted fact that sight, sound, and symbolization skills are essential to reading. Many specialists believe that we not only *see* a picture created by a word symbol, but that we also *hear* a sound suggested by it — simultaneously. For this reason, children with auditory deficiencies — including those who cannot perceptually *feel-hear* a sound — usually have trouble with reading skills. Moreover, our observations of pupils in the Gross Motor Development Program seem to indicate that fluid reading is difficult without a kinesthetic awareness of rhythm. Thus, enhancing the auditory modality through guided experiences in sound discrimination and rhythm is a prerequisite for the development of skills in reading.

Objective	Learning Experience	Resource
The pupil demonstrates the ability to interpret sound clues and word descriptions.	• Have the children follow *oral* directions for movement. Help them to become accustomed to space and descriptive movement phraseology by using simple movements at first, with changes in speed, scope, and direction. *Example:* Run slowly, walk quietly, take large steps on your heels, walk with tiny steps on your toes. Then add more sophisticated movements, equating them with the movements of such animals as bears, seals, monkeys, etc. Let the children move in any direction they choose, but insist that they	Any movement education sequence such as those described by Godfrey and Kephart in *Movement Patterns and Motor Education* (New York: Appleton-Century-Crofts, 1969)

Objective	Learning Experience	Resource
	avoid touching one another (spatial discrimination). Ask them to move on the word *Go* and stop on the word *Stop*. Add an element of excitement, fun, and confusion by yelling "Stop!" when the children expect to hear "Go!" — and vice versa.	
The pupil demonstrates the ability to distinguish between sounds.	· Substitute sounds for *Stop* and *Go*. For example, have the children move on the blast of a whistle and stop on a drumbeat.	Items that will produce distinct and different sounds (e.g., whistle, drum, triangle, handclap, voice)
	Develop sound discrimination as it applies to words by having the children move on a word like *red* and stop on *wed*, or go on *pin* and stop on *pen*.	Any of the words suggested by Wepman's Auditory Discrimination Test
The pupil demonstrates the ability to respond to identical sounds in sequence.	· Substitute a sequence of identical sounds for *Stop* and *Go* (e.g., one whistle blast = *Go*; two whistle blasts = *Stop*).	Soundmakers as described above
The pupil demonstrates the ability to associate sounds and movements.	· Assign particular sounds to particular movements (e.g., a drumbeat means *jump*; the sound of a triangle means *walk*; and the blast of a whistle means *turn*). Give the children time to associate the sounds with the movements, and then present them in simple combinations. *Example:* Beat the drum three times and blow the whistle twice. The children should jump three times and turn around twice.	Soundmakers as described above
The pupil demonstrates the ability to interpret sound/movement sequences.	· Develop increasingly complex sound/movement patterns, using as many as four or five different items in sequence.	Soundmakers as described above
The pupil demonstrates the ability to respond correctly to tempo and rhythm.	· Vary the tempo and rhythm of the sound clues, and have the children adapt their movements accordingly. *Example:* Beat the drum slowly and have the children hop slowly; beat it quickly, and have them hop quickly. Change the tempo and the rhythm for each sound and movement.	A drum, a triangle, and a whistle
The pupil demonstrates the ability to interpret sound/movement sequences which include tempo and rhythm (dance).	· Using a variety of sounds and tempi, develop a simple sound/movement sequence like the following: - Beat the drum three times, slowly/Jump three times, slowly - Strike the triangle once, sharply/Turn once, quickly - Blow two long blasts on the whistle/Leap twice, with exaggerated movement	
The pupil demonstrates the ability to associate auditory symbols with visual symbols.	· Introduce a visual symbol for each movement as a counterpart to the auditory symbol(s) used for that movement in earlier exercises. For example: - Show the children the following symbol:  - Strike the triangle, and	

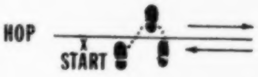
Objective	Learning Experience	Resource
	- Have them spin. or - Show the children the following symbol  - Beat the drum, and - Have them run. Using only two or three symbols at first, create sight/sound/movement patterns which vary in tempo and rhythm, and have the children interpret them. Add musical accompaniment. Eventually, the pattern sequences will evolve as dance. Encourage the children to create their own.	A modification of the Orph and Kodaly systems of music is highly recommended for relating big muscle action to sight/sound symbolization

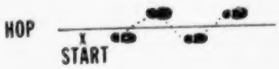
UNIT III

Goal: Improving hand-eye and foot-eye coordination

Preliminary Note

Hand-eye and foot-eye coordination are basic aspects of perceptual-motor development and therefore essential to reading and other types of learning activity. The following suggestions are intended to improve coordination as a prerequisite for reading.

Objective	Learning Experience	Resource
The pupil demonstrates the ability to judge the relationship of his body to a line on the ground or floor.	• Using a rope, tape, paint, a row of tiles, etc., form a straight line on the ground or floor and have the children perform the following actions in relation to it, repeating all movements several times in succession: A. Stand facing the line, about 6"-12" behind it, on one side or the other, near one end. - Hop forward and backward over the line on both feet, and then on each foot separately. - Travel the full length of the line and return by hopping over it on both feet; on each foot separately; and then on one foot in one direction and the other on the return. - Hop forward and backward over the line with feet together; then begin with feet apart, hop over the line, and return with feet together. - Hop forward and backward over the line with quarter, half, and full circle turns in clockwise and counterclockwise directions.	

Objective	Learning Experience	Resource
	- Hop on and off the line with both feet, and then with each foot separately. - Do hop-turns above the line and land in a position which straddles it.	
The pupil demonstrates a kinesthetic awareness of laterality.	B. Stand beside the line at one end, facing the other. - Hop over the line from one side to the other on both feet, and then on each foot separately. - Travel the full length of the line and return by hopping over it from side to side on both feet; on each foot separately; and then on one foot toward the end of the line and the other foot on the return. - Hop over the line from side to side with quarter, half, and full circle turns in clockwise and counterclockwise directions. - Walk the full length of the line and return, crossing the right foot over to the left side of the line and the left foot over to the right. - Repeat the crossover activity described above with larger and larger strides, until the step becomes a leap. - Do a variety of fundamental locomotor movements on or in relation to the line (e.g., balance on it; walk on or over it; hop on or over it; slide on or across it; run on, over, or beside it).	
The pupil demonstrates the ability to differentiate activity in the upper and lower extremities, while paying attention to the task at hand.	• Add an additional factor to the activities described above by giving each child a balloon and having him manipulate it as he performs some of the simpler movements.	Round balloons, 10"-14" in diameter (These are much cheaper if purchased in volume from the wholesaler.)
The pupil demonstrates a kinesthetic awareness of body position and force.	Then have the child place the balloon between his knees and do a series of movements forward, backward, and sideward. *Example:* Walk, run, hop on both feet, hop on the right foot, hop on the left foot, do animal walks (bear, crab, seal), etc.	
The pupil demonstrates hand-eye coordination.	• Ask the child to keep his balloon in the air by tapping it with his hands, knees, elbows, and head. Then have him: - Alternate taps with right and left members of the body. - Perform a varied sequence of taps (e.g., tap twice with the right hand, once with the left hand, twice with the left knee, and once with the right knee).	Remove small and/or dangerou objects from the activity area; but leave or deliberately place large, nondangerous objects there. In general, the more safe obstacles the children have to negotiate, the better.

Objective	Learning Experience	Resource
The pupil demonstrates rhythm and balance.	- Add jumps to the pattern of activity (e.g., tap the balloon into the air with both hands; then jump up and tap it again before returning to the floor). - Vary the jump/tap routine by bouncing the ball against a wall or some other flat, smooth surface. - Repeat the rebound activity described above, using the right hand only, the left hand only, alternate hands, or patterns or left and right. At this point, you may wish to add an element of competition. *Example:* Divide the group into pairs according to height, allow one point for each tap, and establish a winning score. Be careful not to stress the competitive aspect or emphasize winning — the fun of the activity should be paramount.	
The pupil demonstrates the ability to judge time and space.	• Have the children perform increasingly complex activities such as the following — but be sure that the level of difficulty is not so high that it prevents the children from succeeding: - Tap the balloon up, spin around clockwise and/or counterclockwise, find the balloon, and then tap it again before it touches the floor. Repeat, tapping the balloon against a wall. - Tap the balloon up, run to a wall, touch it, run back, and catch the balloon before it touches the floor. Repeat, adding an obstacle (perhaps a partner) to run around, jump over, or crawl under. Repeat, substituting jumping jacks, cartwheels, or similar stunts for the obstacle course. - Bounce or dribble the balloon with both hands, with the right hand only, with the left hand only, with alternate hands, or in varied patterns (e.g., dribble twice with the right hand, once with the left hand, etc.).	
The pupil demonstrates foot-eye coordination and body balance.	• Have the children do a variety of kicking activities such as the following: - Kick the balloon with alternate feet. - Place the balloon on the floor, kick it up, and catch it. - Drop the balloon and kick it before it touches the floor. - Keep the balloon in the air with one foot only. Repeat all kicking activities, having the children use both feet simultaneously — *if and when* the children are ready for it. Activities of this type require a high degree of balance and should therefore be introduced on a limited basis.	

Objective	Learning Experience	Resource
The pupil demonstrates the ability to adjust to time and space set by an outside force.	• Divide the children into pairs and have each pair keep first one, and then two balloons in the air between them. Have them do some of the activities described on the preceding pages.	
	Vary the exercise by having the children tap the balloons with such implements as wands, rulers, paddles, etc.	Any batting implement that children can use with ease and safety
The pupil demonstrates increased rhythm and balance.	• Have the children perform activities like those described above to the rhythmical accompaniment of music, drumbeats, handclaps, etc.	Music, drumbeats, handclaps, etc.
The pupil demonstrates the ability to interpret and symbolize.	• Color-code your fingers, attach letters or numbers to them, or use Cuisenaire rods to indicate *how*, and *how many times* the children should tap their balloons. Then have the children follow your directions by interpreting the symbols. For example, as you hold up one of the rods, the children should tap their balloons the number of times the rod represents.	Colored paper, paint, letter or number stickers, Cuisenair rods (math aids available from Cuisenaire Rods, 12 Church Street, New Rochelle, New York 10805)
	N.B. From exercises with balloons, the children can progress to ball activities. A light plastic ball is recommended before a playground ball is used.	

SELECTED RESOURCES

Barsch, R.H. *Perceptual motor curriculum.* 2 vols.: v. 1 - Achieving perceptual motor efficiency; v. 2 - Enriching perception and cognition. Seattle: Special Child Publications, Inc., 1968-9.

Cratty, B.J. *Learning and playing: fifty vigorous activities for the atypical child.* Freeport, N. Y.: Educational Activities, Inc., 1968.

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Samuel F. Paradise

Head of the Physical Education and
Orientation/Mobility Department
New York State School for the Blind
Batavia, New York 14020

PERCEPTUAL-MOTOR DEVELOPMENT

Blind or Visually Impaired

Primary
Intermediate
Advanced

Preliminary Note

Blindness tends to make one feel earthbound, and therefore results in some degree of physical retardation. For this reason, it is vital that pupils with visual handicaps become involved in physical education programs that stress the development of body awareness, fitness, coordination, peer group acceptance, teamwork, sportsmanship, etc. In general, these programs should be the same as those designed for children without visual impairments — the major modification being an emphasis on sound clues and tactile aids or models. However, the data derived from physical examinations, fitness tests, and the reports of eye specialists can be used to develop *individualized* programs which capitalize upon the pupil's capabilities, while meeting his particular needs.

The three most important qualifications for effective programs for the visually handicapped are teacher/learner rapport, adaptation to need, and a continuing pattern of success experiences. Teachers must be ready to touch and be touched. Since the basic information-gatherers for blind children are hearing and feeling, teachers should:

- Give directions clearly, completely, and verbally;
- Use sound cues and clues as often as possible; and
- Move the pupils through the activities to be performed.

Tactile and, in some cases, even visual aids might also be used.

The importance of physical education activities which increase the pupil's perception and use of sound and tactile clues, awareness of and orientation to his environment, and ability to operate effectively within that environment is obvious. But these activities will be of greater value to the child if they are correlated with other aspects of his total educational program, and if they have carryover qualities for daily living.

The following units of instruction have been adapted from the sequential program described in the New York State School for the Blind's *Physical Education Guide*.

UNIT I

Goal: Developing a general knowledge of the body parts and an appreciation of their movements

Learning Level: Primary

Objective	Learning Experience	Resource
The pupil demonstrates the ability to identify, to locate, and to use the various parts of his body.	• Have the children line up in several rows, facing in one direction (NESW). Change the direction each day to reinforce their awareness of direction as a part of their environment. Play "Simon Says," "I Can, Can You?," "Follow the Leader," or similar types of games. The whole activity should be voice-oriented.	Games such as "Simon Says," "I Can, Can You?," and "Follow the Leader"

Objective	Learning Experience	Resource
	Describe the *total* activity to be performed. Then help the children to do parts of it in sequence — on a 1-to-1 basis, if necessary. First have the pupils perform the activity at your direction, and then have them do it independently.	
The pupil demonstrates the ability to position his body parts in various planes and angles.	• Ask the children to listen carefully to verbal directions, and then translate those directions into actions. Help the children *kinesthetically*, using teacher-model or teacher-aided movements. Develop necessary concepts through the use of tactile models or explorations (i.e., tracing the ball to develop the concept of a circle).	Animal walks Twisters A record player A recording of "Chicken Fat" A cage ball (for big circles) A basketball (for small circles)
The pupil demonstrates the ability to use sound clues to orient himself to his environment, and to maintain that orientation.	• Explain what is required of each child in the performance of the game or activity. Then ask one of the children to: - Go to the starting reference point, - Listen to the sound clue, - Walk to the sound clue as a goal, and then - Return to the original starting point. Repeat until each child has had one or more success experiences, and then vary the activity. A mat placed in front of the sound goal is an important tactile reference point.	2 portable goal indicators
The pupil demonstrates the ability to understand and perform coordinated body movements, such as jumping.	• Have the pupil sit astride a hoppity-hop, leaning forward with both hands on the pummel. Ask him to push up with both legs and maintain balance. • Help one of the children to take the position for Jack-in-the-box. Then ask him to sing or recite a poem while performing the activity of jumping. Repeat with others in the class. *Tactually* explore the entire trampoline with the child, and then help him to get up on it. Ask him to orient himself to the center of the trampoline with tactile and auditory clues. Then have him perform arm circles, and coordinate the circles with jumping activities. Help the pupil to effect a stop, by bending his knees and holding his position.	Hoppity-hop (a patented toy found in most toy stores) Arthur G. Miller and Virginia Whitcomb, *Physical Education in the Elementary School Curriculum*; 3d ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969) Cardboard boxes with hinged tops A trampoline

UNIT II

Goal: Increased use of the large muscle groups

Learning Level: Intermediate

Objective	Learning Experience	Resource
The pupil demonstrates the ability to understand the use and limitations of his body parts and their movements.	• Give verbal descriptions, act as a model, and/or physically assist the child with the following exercise/activity. Have the pupils stand in lines, with arms outstretched to the sides, turn a full circle, and orient themselves to the teacher's voice. Ask them to perform on command, and to participate by counting out loud. Then, while in exercise formation, have the children touch only: 1 body part to the floor 2 body parts to the floor 3 " " " " " 4 " " " " " 5 " " " " " 6 " " " " " 7 " " " " " 8 " " " " " 9 " " " " " Have the children hold the various body positions until you've checked them.	Modified calisthenics
The pupil demonstrates the ability to position his body parts in various planes and angles.	• Do scooter relays. Have the children form two lines (teams) and select a captain and a name for each. Verbally describe the activity, the method, and the tactile goal (these can be changed with each relay). Have some of the children act as goals, using various sound clues produced by voice, hands, or soundmakers. Instruct the players to call their teammates back to their lines. Ask for questions and begin.	Scooter relays
The pupil demonstrates the ability to use sensory clues to orient himself to his environment, and to maintain that orientation.	• Do animal walk relays in the manner described above.	Animal walk relays
The pupil demonstrates the ability to understand and perform coordinated body movements.	• Have the children tactually explore the pogo stick to locate foot pedals and hand grips, explaining and assisting whenever necessary. Make sure the children understand that they are to stop on signal as a safety factor.	Pogo sticks
	Have the pupils do the elementary progression for the trampoline, and then do progressive drops (i.e., sit, knee, front, back, and combinations of the above).	A trampoline

UNIT III

Goal: Increased use and coordination of large muscle groups

Learning Level: Advanced

Objective	Learning Experience	Resource
The pupil demonstrates the ability to position his body in various planes and angles.	• Have the pupils do modified gymnastics. Ask them to listen carefully and then perform the positions and movements for such activities as log rolls, forward and backward rolls, tipups, and headstands. If necessary, use teacher-model or student-model movements as kinesthetic aids or move the children through the activity to be performed.	
The pupil demonstrates the ability to use sensory clues to orient himself to his environment, and to maintain that orientation.	• Play a modified game of softball. Using either an auditory or a tactile field layout, describe it to the class and then explain the rules and regulations of the game as they are to play it (e.g., if a fielder touches the ball before it stops, the batter is out). Then bounce the ball — the batter will listen for the bounce and swing his bat.	Bases or cones A bat A volleyball
The pupil demonstrates the ability to understand and perform more coordinated body movements.	• Carefully describe the various positions and holds in wrestling, moving individual pupils through them as you talk. Then have each attempt the motions on his own, correcting or assisting him whenever necessary. When the group seems to be ready, divide the pupils into pairs and let them wrestle each other under your watchful guidance. Many of the boys become very good wrestlers.	Head gear Uniforms Mats
	• Do rope climbs. Have each pupil explore the rope with his hands. Then describe the height to be climbed and help him through the following procedure: - Address the rope with proper grip and foot position. - Pull with the arms and lift with the knees, letting the rope slide between the ankles. - Clasp the rope with the ankles and push down with the legs, while moving up the rope in hand-over-hand fashion. - Come down the rope in hand-under-hand motion, allowing the rope to slide between the ankles. Repeat the activity often enough to enable each pupil to have success experiences with climbing ropes to a variety of heights.	Ropes Rosin Sweatsuits

PHYSICAL FITNESS

Julian U. Stein

Consultant, Programs for the Handicapped
American Association for Health, Physical
Education, and Recreation
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

Noncategorical
Any learning level

Preliminary Note

Physical fitness is a state in which the individual possesses the qualities of strength, power, agility, flexibility, endurance, balance, speed, and general coordination to the extent that he is able to meet his everyday needs and emergency situations adequately. This implies that the functioning of the cardiorespiratory system is attuned to meet these needs and situations.

There are many ways in which physical fitness can be developed. Some activities contribute more to fitness than others; and certain approaches are more beneficial in promoting some fitness traits, while other techniques are more effective in stimulating and maintaining other traits. It is incumbent upon the instructor to know and understand what constitutes good physical fitness and to select activities that will make positive contributions to fitness. There is no single approach or magic formula to guarantee that the individual will reach the desired level of physical fitness — a varied and diversified program is obligatory. In selecting activities, the individual characteristics of the participant must be considered — his chronological age, mental age, degree of impairment, type of condition, previous experience, functional abilities, motivation, and the importance of the task in his development. Other important considerations are the contributions of the activities themselves to attaining the specific and overall fitness objectives, and the use of techniques and approaches built upon sound educational, psychological, physiological, and scientific foundations.

In developing a well based program, sufficient time must be devoted daily for vigorous physical activity to assure progress and improvement in the individual components of physical fitness. Specific causes for low levels of physical fitness should be astutely determined and appropriate remediation planned and implemented. In doing so, activities can be selected and structured according to the fitness objective and goals for the individual at any given time. The following items may prove helpful in this process:

- STRENGTH is developed by working against resistance so that the *overload principle* is applied. Resistance can be provided by working against and with partners, weights, bars, dumbells, medicine balls, apparatus, logs, ropes, or other kinds of weighted objects.
- POWER is developed in activities of an explosive nature where maximum force is released at a specified moment. Jumping; certain types of throwing activities; and activities designed for quick, forceful movements encourage the development of power.
- AGILITY is developed in activities in which the body must be maneuvered in space. Twisting, turning, side-stepping, and sudden starting and stopping are dependent upon agility.
- FLEXIBILITY is developed in activities that provide for the maximum range of movement in any given joint. Stretching, swinging, swaying, and other similar body movements promote flexibility.
- MUSCULAR ENDURANCE is closely related to the strength of a muscle and is developed in activities where a maximum number of repetitions are done against a fixed resistance (e.g., pullups, pushups, and situps). Almost all activities that promote strength can be adapted for developing muscular endurance. Circuit training and the interval system applied to a variety of activities are excellent for promoting muscular endurance.
- CARDIORESPIRATORY ENDURANCE is influenced by the ability of the body cells to obtain and use oxygen and by the ability of the body to rid itself of carbon dioxide. Cardiorespiratory endurance is improved by prolonged rhythmical activity, interval running, swimming, cross-country running, hiking, bicycle riding, and running games. Gradual progression and pace are important considerations in planning and implementing activities designed to improve cardiorespiratory endurance.

- BALANCE is of several types — static, dynamic, and that involving the handling of an object.
    - STATIC BALANCE is developed in activities where the postural orientation of the body remains motionless.
    - DYNAMIC BALANCE is developed in activities where the equilibrium is maintained while the body is in motion.

  Balance board, balance beam, and trampoline activities promote the development of balance, as do many simple activities in which the individual is forced to make changes in his center of gravity in response to postural or environmental changes. Whether one opens or closes his eyes when he performs balance activities makes a substantial difference.
- SPEED is dependent upon muscular contraction and is developed in activities which emphasize quick movements.
- GENERAL COORDINATION is the ability to integrate several different kinds of movement into a single effective pattern. This ability is developed in a wide variety of activities, and with diverse approaches that range from the simple to the complex.

The factors that must be considered in developing fitness programs include such things as the specific nature of movement, learning, and activity. Recent studies indicate that in even such basic fitness characteristics as strength, the transfer from one activity, task, or exercise to another is dependent upon the range of motion through which the act is performed and the angle at which it is done. The low relationship between so-called gross and fine motor acts, the even lower relationships among various fine motor acts, and the low relationships among gross acts are additional important considerations. Again, close attention must be given to the specific nature of fitness activities and the quality which *in fact* transfers.

The fitness experiences presented in the following units have *not* been delineated in terms of specific handicapping conditions, since all of the activities listed can be adapted in terms of methodological modifications for individuals with any one of a number of conditions (e.g., Guide the blind youngster through the same balance activities as those described so that he will get the *feel* of the movements. Let youngsters in wheelchairs participate in "running" activities in their wheelchairs. Use wooden dowels, broomsticks, or other light rods to modify the resistance-training activities for physically involved youngsters—additional weight can be added with fishing sinkers, door knobs, or other easily obtained materials to increase resistance.) Teacher imagination, innovation, and resourcefulness are the keys to making adaptations and modifications of these activities to meet the specific and individual needs of each student regardless of his medical, physical, or related conditions.

A few suggestions:

- The materials presented in these units should be approached as examples of ways in which specific fitness characteristics, traits, or elements can be broken down into sequential progressions with added variations to make each task easier or more difficult, according to student needs. By applying this concept to other fitness characteristics and traits as well as to other motor activities, teachers can truly individualize according to student needs. These same activities can be incorporated into other approaches so that the specific fitness element is emphasized through a different medium (e.g., games, relays, stunts, self-testing activities, exploratory approaches, structured activities, and rhythms).

- The same activity can be used for different purposes by changing the emphasis and focus. For example, parachute activities can be used for fitness purposes by stressing the number of locomotor movements performed during a given time. These same activities can be used to develop efficiency and effectiveness in the movements themselves by stressing the quality of the movements.

- Fitness activities involve several elements — *the number of repetitions performed, sets of activity, the rest interval between sets, the speed at which the activity is performed*, and *what is done during the rest intervals*. Change any one of these, and the activity is made more or less difficult and challenging.

- Finally, and most important, keep the *fun* in fundamentals and fitness!

UNIT I: Increasing Cardiorespiratory Endurance

Goal: Developing specific elements of physical fitness to the maximum degree possible for each individual

Objective	Learning Experience	Resource
The student demonstrates the ability to perform increasingly difficult and complex tasks and activities that reflect increased cardiorespiratory endurance. (*Cardiorespiratory endurance* is defined as increasing the ability of the heart and lungs to sustain vigorous activity for longer periods of time.)	· BENCH STEP Face the bench and alternately step up and down to a rhythm of left *up*, right *up*, left *down*, right *down*. Repeat for 30 seconds (1-5 minutes) at 30 (20, 10) steps per minute. Increase the time and/or speed as the youngsters get in better condition.	HELPFUL HINTS Use music to sound a cadence. Drums, cymbals, clapping, or words are also effective for this purpose. Use benches, chairs, or stools that are at least 15" high. Use scales and other data in order to measure progress and cardiorespiratory endurance through this activity.
	· THE RUNNER Run in place, landing low on the balls of the feet. Lift the knees to the waist or higher, and pump the arms vigorously. - Lift the feet only about 1" off the floor. - Run for a designated number of steps or a specific length of time (20, 30, 60 seconds); rest for a specific length of time, and then run again; increase the length of the run and the number of running periods, and decrease the length of rest periods. - Run up a short, steep hill; then walk or jog down. - Run up flights of steps; then walk down. - Hold the arms so that the hands are at thigh (waist, abdomen, chest) level, and touch the knees to the hands. - Run very slowly at first, and then very rapidly — like the tortoise and the hare.	
	· CRAZY LEGS *Run-in-place* Run in place, landing low on the balls of the feet. - Bounce on both feet. - Lift the knees high. - Lift the feet only about 1" off the floor. *Windshield Wiper* Move the legs alternately astride and together.	HELPFUL HINTS Perform each of the activities for a designated length of time or a stipulated number of steps. Add variations to challenge the youngsters and to maintain interest. Change movement on signal (verbal, visual, abstract).

Objective	Learning Experience	Resource
	- Crisscross the legs. - Move the legs alternately astride and crisscross. *Pogo Spring* Move the legs alternately forward and back. - Move the legs alternately forward/back and astride together.	Perform each activity in sequence for a designated number of counts (4, 8, 16); continue for a designated length of time or a stipulated number of total counts.
	• RUN/WALK Run and walk for predetermined distances. Increase the length, time, and speed of running gradually, and decrease the amount of walking. Set up tracks or courses in the gymnasium, on a blacktop area, on a tennis court, playfield, around a baseball or softball diamond, or between two points; use chairs (tires, bleach bottles, milk cartons, bowling pins, traffic cones, marked lines) to set off the track or course. Use patterns such as the following: - Run short sides and walk long sides. - Run long sides and walk short sides. - Run a short side and a long side, and then walk a short and a long side. - Run a short and a long side, and then walk a short side; run a long and a short side, and then walk a long side; continue to run two sides and walk one side. - Run three sides (short, long, short), and then walk one long side; run three sides (long, short, long), and then walk one short side. - Run four sides (one lap) and walk two sides (half a lap). - Run two laps and walk one lap. - Run four laps and walk a half-lap. - Increase running and decrease walking as the condition and ability of youngsters improve.	HELPFUL HINTS Devise a variety of ways to make this activity more enjoyable (e.g., chase the youngster; have him chase you; run with him; introduce games). Time the youngsters for various distances and laps to encourage them to run faster and longer. Introduce mileage clubs and other devices where individual students can see their own progress toward specific goals (e.g., 50 miles, running the distance from the hometown to the State capital).
	• ROADWORK Include a variety of activities in each roadwork session — locomotor activities such as walking, jogging, shuffling, running, sprinting, formal exercises, stunts, self-testing activities, partner activities, and combatives. Incorporate other locomotor activities such as jumping, hopping, skipping, galloping, leaping, and sliding. Develop the patterns, distance, and length of time for roadwork sessions according to the age, ability, and condition of the youngsters — an entire period can be developed around roadwork.	HELPFUL HINTS Set up jogging/running courses on park greens, stadium turf, golf courses, wooded areas, and similar places. Use natural surroundings, fallen tree branches and trunks, fences, small ditches, culverts, hills, logs, large

Objective	Learning Experience	Resource
	Play follow-the-leader, changing leaders often and having the youngsters run to the front in order to become the leader. Adjust the speed of the run to the slowest individual in the group, and time the length of the session to the individual with the least stamina. *Sample Roadwork Session* (35-45 minutes — adapt and shorten according to each individual situation). - Run in place until the entire group has assembled. - Jog 50-200 yards while swinging the arms in various ways. - Jump to head an imaginary soccer ball or to touch the leaf or branches of a tree — see who can jump the highest. - Swim an imaginary river, pond, lake, or pool. - Balance in a variety of ways. - Jog 75-150 yards and change to race walking for an additional 50-100 yards. - Do simple individual tumbling stunts such as forward, backward, and side rolls. - Carry a partner piggyback; change after 25-30 yards. - Shadowbox several rounds with an imaginary opponent. - Run between two points with a partner. - Jog at a faster pace for 50-200 yards. - Jump over various obstacles or barriers; hop over others. - Sprint 50 yards with a partner. - Walk or amble 100 yards. - Do pushups, situps, partner pullups, pistons, partner pushes, and other exercises. - Jog 100-200 yards in zigzag fashion. - Play follow-the-leader. - Jump and vault over various objects. - Walk at a fast pace for 100 yards. - Get a partner for combative activities such as hand wrestling, hand tug-o-war, or chicken fights. - Do a variety of individual stunts such as cartwheels, walk-on-hands, and handsprings. - Run at an easy, steady pace for 100-200 yards. - Get a partner for various partner stunts such as the centipede, the wheelbarrow, and the fireman's carry.	rocks, and other objects found in the local environment as obstacles. Adapt less natural outdoor surroundings such as playgrounds, stadiums, school yards, large open areas, residential facility campuses, home yards, and such indoor areas as gymnasiums, halls, multipurpose rooms, auditoriums, and cafeterias for roadwork.

Objective	Learning Experience	Resource
	- Sprint back to start, gradually increasing the distance of the sprint from 100 to 400 yards. Include activities such as the following: - Games that involve running, such as fleeing, chasing, tag, and others with continuous movement - Rope jumping, parachute activities, and rope activities - Exploratory activities with and without music - Rhythmic activities, including folk and square dancing - Special programs such as the Canadian 5BX program, the President's Committee on Fitness and Sports programs, and aerobics activities - Basic locomotor activities that emphasize *quantity* of movement through running, jumping, hopping, skipping, galloping, sliding, etc. - Circuit training and interval approaches - Swimming and aquatic activities, including special conditioning and fitness activities in the water - Less formal activities which include hiking, walking, cycling, etc., as well as jogging	

UNIT II: Improving Static and Dynamic Balance

Goal: Developing specific elements of physical fitness to the maximum degree possible for each individual

Objective	Learning Experience	Resource
The student demonstrates the ability to perform increasingly difficult and complex balance tasks. (*Balance* is defined as the ability to maintain good posture and alignment of body parts while moving or not moving, in various positions, and on stationary or moving objects. As such, balance activities will be grouped as follows:	• BASIC BODY BALANCES Take a position on the hands, knees, and feet with the legs and arms about a shoulder's width apart. Move the left (right) arm forward (backward, sideward) to shoulder level. Extend the left (right) leg backward. Move the arms and legs in various combinations: - Lift both arms. - Lift both feet. - Lift the arm and the leg on the same side of the body. - Lift the arm and the leg on opposite sides of the body.	HELPFUL HINTS Make designated movements without moving other parts of the body. Perform activities with eyes open and then closed. If necessary, start the youngster flat on his back or stomach, rather than in support positions.

Objective	Learning Experience	Resource
• Immobile medium — static balance • Immobile medium — dynamic balance • Moving medium — static balance • Moving medium — dynamic balance	- Lift both arms and one (other) foot. - Lift both feet and one (other) arm. - Lift both feet and both arms (balance on the knees). Lift the knees and support the body on the hands and toes; then move the arms and legs in various combinations: - Lift the left (right) arm forward (backward, sideward) to shoulder level. - Extend the left (right) leg backward. - Lift the arm and the leg on the same side of the body. - Lift the arm and the leg on opposite sides of the body. - Kick both feet into the air. Sit, raise the buttocks off the floor, and support the body on the hands and feet; then move the arms and legs in various combinations: - Extend the left (right) leg forward. - Extend the left (right) arm backward (forward, sideward). - Lift the arm and the leg on the same side of the body. - Lift the arm and the leg on opposite sides of the body. - Kick both feet into the air. Lie on the side with the arms (one on top of the other) extended overhead, and the legs (one on top of the other) fully extended; raise the top arm and leg vertically, attempting to make contact with the hand and the foot without bending the elbow or the knee; hold for a designated count or length of time. Lie on the back, bring the legs to a 45° angle, extend the arms forward to touch the toes, and balance on the buttocks. Incorporate or develop these specific activities into: - Stunt approaches. - Relays. - Games. - Self-testing activities. - Exploratory approaches. Use rhythm, music, or other signals to indicate movements.	

Objective	Learning Experience	Resource
	• BALANCE IN MOTION ACTIVITIES *Beetle* — Creep on hands and knees. *Monster* — Support the body on hands and feet; walk, keeping arms and legs straight. *Bear Walk* — Support the body on hands and feet; walk by moving right arm and left leg; keep arms and legs straight. *Lame Dog* — Support the body on hands and feet, elevate the left (right) leg, and move both hands and right (left) foot; change the position of the feet after going a designated distance. *Crab* — Sit, raise the buttocks off the floor, support the body on hands and feet, and move forward (sideward). *Seal* — Support the body on hands and feet; keep the feet together and the legs straight; walk forward with the hands; drag the legs behind. *Coffee Grinder* — Support the body on the right arm and both feet; keep the arm and legs fully extended with the feet slightly apart; move the feet and body in a circle, using the right arm as a pivot; repeat, using the left arm. *Leaning Tower* — Support the body on the extended right arm and hand and the side of the right foot; hold the left arm against the side, and place the left leg on top of the right leg; extend the left arm straight up, and hold the position for 5 (10, 15, 20) seconds; return to the starting position; extend the left leg straight up, and hold for the designated time; return to the starting position; extend both the left arm and leg, and hold for the designated time. Rest between different movements, if necessary, and repeat the movements with the right arm. *Crazy Knees* — Balance and walk on the knees. Incorporate or develop these specific activities into: - Stunt approaches. - Relays. - Games. - Self-testing activities. - Exploratory approaches. - Circuit approaches. - Interval activities.	HELPFUL HINTS Challenge the youngsters by having them perform a variety of basic body balances in motion such as animal walks, imitative activities, and other original ways. Add variations by having the youngsters move in different directions (forward, backward, sideward, over, and under obstacles); in different ways (lift, carry, or extend arms and legs in various combinations); and at different speeds (slow, slower, fast, faster). Perform activities with eyes open and then closed.

Objective	Learning Experience	Resource
	Use rhythm, music, or other signals to indicate movements. • STORK STAND PROGRESSIONS Stand on the left foot with the hands on the hips and the right foot placed against the inside of the left knee; reverse and stand on the right foot, with the left foot placed against the inside of the right knee. - Fold the arms across the chest. - Hold the hands against the thighs. - Extend the arms above the head. - Extend the arms to the sides at shoulder level. - Hold one arm in one position and the other arm in another position (such as high-low; front-back; up-down; front-side). - Hold the free foot close to the ground (forward, backward, sideward, at different heights). - Bend forward at the waist until the upper body is parallel to the floor; extend the free leg directly back until the foot is held about shoulder level; keep the extended leg straight, and the head up and directly to the sides at shoulder level.	HELPFUL HINTS Make designated movements without moving other parts of the body. Hold each position for 5 (10, 15, 20, 30) seconds. Perform activities with eyes open and then closed.
	Perform other tasks while holding balance, such as: - Bouncing a ball. - Playing catch. - Holding objects of different weights (beanbags, weighted bleach bottles) in each hand. - Balancing objects (beanbags, balls) on different parts of the body (the palm of the hand, the back of the hand, the arm, the elbow, the head, the shoulder). Incorporate or develop these specific activities into: - Stunt approaches. - Relays. - Games. - Self-testing activities. - Exploratory approaches. - Circuit approaches. Use rhythm, music, or other signals to indicate movements.	POSSIBLE NEEDS Assorted balls Beanbags Bleach bottles Weights Weighted stuffed animals

Objectives	Learning Experience	Resource
	· AND AWAY WE GO PROGRESSIONS Perform *Basic Body Balances*, *Balance in Motion Activities*, and *Stork Stand Progressions* within increasingly narrow boundaries. Walk (heel-toe, touch knee to heel) between designated points, gradually increasing the distances and reducing the width of the boundaries. Perform jump turns of increasing sizes (1/4, 1/2, 3/4, 1 1/4) within increasingly narrow boundaries. Perform various combinations such as walking from one point to another in one manner and returning in another (walk to a point, turn, continue in another way). Devise other activities, combinations, and routines.	HELPFUL HINTS Use the lines on the floor; designated rows of floor tiles; lines made with tempera, contact paper, chalk, or masking tape; or items such as clothesline stretched on the floors as boundaries. Make the boundaries increasingly narrow until the youngsters are performing activities on the lines or objects. Make the boundaries in different shapes (circles, triangles, squares, rectangles, snails, mazes). Add variations by having the youngsters move in different directions (forward, backward, sideward); over and under obstacles; in different ways (lift, carry, or extend arms in various directions); and at different speeds (slow, slower, fast, faster). Add variations by having the youngsters move on different parts of the foot (toes, heels, outside, inside); perform other tasks (bounce a ball, play catch, hold objects of different weights in each hand, balance objects on different parts of the body, jump rope, turn a hoop, wheelbarrow); and use different locomotor movements (walking, jumping, hopping, sliding, leaping, galloping). Use tiles, wooden blocks, contact paper cut in various shapes, cinder blocks, bricks, cans, underrunners of carpeting, or other objects for the youngsters to move across while performing

Objective	Learning Experience	Resource
		various activities. Perform activities with eyes open and then closed.
	• BALANCE BEAM ACTIVITIES Perform *Basic Body Balances*, *Balance in Motion Activities*, *Stork Stand Progressions*, and *Away We Go Progressions* on increasingly narrow balance beams. Perform various combinations and combative (hand wrestling, chicken fighting, bulling) activities with a partner. Devise other activities, combinations, and routines. Incorporate or develop these specific activities into: - Stunts. - Relays. - Games. - Self-testing activities. - Exploratory activities. - Circuit activities. Use rhythm, music, or other signals to indicate movements.	HELPFUL HINTS Use a regulation low or high balance beam. Devise your own balance beam from two-by-fours, constructing it in such a way that either the 4-inch or the 2-inch side can be used. Introduce graduated balance beams in which the sections get increasingly narrow (6", 4", 2", 1"). Place them in different patterns (straight, W, V, N, M, L). Perform activities with eyes open and then closed. Devise your own innovative and creative balance beams (e.g., *multiple* beams, where each side is a different width; *tapered* beams, where the width tapers from 4" to a point; or *step ladders*).
	• BALANCE BOARD ACTIVITIES Perform *Basic Body Balances* and *Stork Stand Progressions*. Perform see-saw activities when the balance board is supported on a 2"x4" base. Work with a partner in different activities on balance boards of various sizes and shapes. Devise other activities, combinations, and routines. Incorporate or develop these specific activities into: - Stunts. - Relays. - Games.	HELPFUL HINTS Make balance boards 16"x16"x ½" with two 2"x4" bases, 16" (8", 4", 2", 1") per board. Introduce the activities with the balance board flat on the floor, and then place two 16"x2"x4" bases under the balance board so that the height off the floor is gradually increased. Criss-cross the other 2"x4" bases under the main balance board to increase the height even more. Reduce the support under the

Objective	Learning Experience	Resource
	- Self-testing activities. - Exploratory activities. - Circuit activities. Use rhythm, music, or other signals to indicate movements.	balance board by using smaller 2"x4" bases. Use only one 16" base the width of the balance board; turn the length of the balance board; reduce the support by using smaller 2"x4" bases; and secure the supports 4" and smaller with a wing nut or wooden peg. Use other objects such as tires and inner tubes. Devise other types of balance boards that offer additional challenge for the youngsters (e.g., curve the bottom support, make the balance board itself smaller and/or attach the top of the board to springs).

UNIT III: Increasing Muscular Endurance in the Arms and Shoulders

Goal: Developing specific elements of physical fitness to the maximum degree possible for each individual

Objective	Learning Experience	Resource
The student demonstrates the ability to perform increasingly difficult and complex activities, showing greater levels of muscular endurance of the arms and shoulders. (*Muscular endurance of the arms and shoulders* is defined as the ability to use the arms and shoulders for longer periods of time.)	· Basic starting position for all activities unless otherwise indicated: - Place the palms of the hands on the floor just under and slightly outside of the shoulders. - Point the fingers forward. - Keep the body straight. - Focus the eyes slightly in front of the hands. Variations of the basic starting position to make it more or less difficult: - Move the arms closer together or farther apart. - Raise the upper body by placing the hands on a bench (seat of a chair, leg, cinder block, partner's back). - Raise the legs by placing the feet on a bench (seat of a chair, box, leg, cinder block, partner's back). - Use the knuckles (closed fist, finger tips) instead of the palms of the hands.	

Objective | Learning Experience | Resource

- SUPPORT/WALK ACTIVITIES

Straight Arm Support/Walk — Support for 5 (10, 15, 20, 30) seconds. Keep the feet in place, and use the hands to move the body in a circle around the feet.

Bent Arm Support/Walk — Bend the arms to approximately 90° and support for 5 (10, 15, 20, 30) seconds. Keep the feet in place and use the hands to move the body in a circle around the feet. Keep the elbows bent.

Coffee Grinder — Support the body on the right arm and both feet. Keep the arms and legs fully extended with the feet slightly apart. Move the feet and body in a circle, using the right arm as a pivot. Repeat, using the left arm.

Seal Walk — Support the body on the hands and feet. Keep the feet together and the legs straight. Walk forward with the hands, dragging the legs behind.

Wheelbarrow — Walk on the hands while a partner holds and guides by holding the ankles.

Approach these activities as:

- Stunts.
- Self-testing activities.
- Relays.
- Games.
- Exploratory activities.

- MODIFIED PUSHUPS

Knee Pushups — Support the weight on the hands and knees with the feet off the floor. Bend the elbows and touch the chin (nose, forehead, chest) to the floor. Return to the original position and continue in this manner.

Wall Pushups — Stand with the feet together 18"-24" from a wall. Extend the arms from the shoulders with the hands flat against the wall approximately a shoulder's width apart. Bend the elbows and touch the chin (nose, forehead, chest) to the wall. Return to the original position and continue in this manner.

- PUSHUPS

Pushups — Bend the elbows and touch the chin (nose, forehead, chest) to the floor. Return to the original position and continue in this manner.

Objective	Learning Experience	Resource

One Leg Pushup — Perform the pushup as described above, and keep one leg extended throughout the exercise.

Chinese Pushup — Make a window by allowing the thumbs and forefingers just to touch each other. Bend the elbows and touch the nose to the floor through the window. Return to the original position and continue in this manner.

Tiger Pushups — Stand with the back to the wall and the heels from 1"-2" from the wall. Place the feet on the wall and walk backwards up the wall until the body is fully extended and supported on the hands. Hold this position for 5 (10, 15, 20, 30) seconds or bend the elbows and touch the chin (nose, forehead, chest) to the floor. Return to the original position and continue in this manner.

Include these activities:

- In interval activities.
- In circuit approaches.
- With music.
- In exploratory approaches.

- SPECIAL PUSHUPS

Pile Driver — Push vigorously into the air and clap the hands (hands and feet) together while in the air.

Chest Slap — Push vigorously into the air and slap the chest with both hands while in the air.

Approach these activities as:

- Stunts.
- Self-testing activities.

- IN-ORBIT PUSHUPS

Behind-the-back Pushups — Push vigorously into the air and clap the hands together behind the back while in the air. *(Do only on mats, grass, or other soft surfaces.)*

Superman Pushups — Place the right hand directly under the chest and the left hand on the right. Push up.

Extension Pushups — Extend the arms fully above the head and raise the body from the fingertips and toes.

Include activities such as the following:

- Resistance activities, weight training, and others which use overload principles

Objective	Learning Experience	Resource
	- Partner activities such as dual stunts, combatives, carrying relays, and partner calisthenics	
	- Parachute activities	
	- Isometric activities, including those done with inner tube bands	Inner tubes
	- Climbing, hanging, and related activities on such playground apparatus as the jungle gym, horizontal ladder, horizontal bar, and Swedish gym	Playground apparatus
	- Selected apparatus activities on the horizontal bar, still rings, parallel bar, horizontal ladder, etc.	Indoor apparatus
	- Specially developed circuit activities	
	- Self-testing activities emphasizing arm and shoulder use	
	- Confidence (obstacle) courses designed with the arms and shoulders in mind	
	- Team and individual leg activities	
	- Application of interval techniques to arm and shoulder activities	
	- Improvised activities through the horizontal bar progression, including regular horizontal bar activities such as pullups, flexed arm bar hangs, straight arm bar hangs, and supine pullups on a bar supported on a seat or the rungs of a chair	Horizontal bar Bar and 2 chairs
	- Climbing rope activities	Climbing ropes

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SOURCES OF INFORMATION RE: PROGRAM AIDS, ADMINISTRATION, AND AVAILABLE FEDERAL AND PRIVATE FOUNDATION GRANTS

Bureau of Education for the Handicapped, United States Office of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202.

The Joseph P. Kennedy, Jr., Foundation, 719 13th Street, N.W., Washington, D.C. 20005.

National Association for Retarded Children, 420 Lexington Avenue, New York City, New York 10017.

National Recreation and Parks Association, 1700 Pennsylvania Avenue, N.W., Washington, D.C. 20006.

Programs for the Handicapped, American Association for Health, Physical Education, and Recreation, 1201 16th Street, N.W., Washington, D.C. 20036.

Frederick C. McCurry

Assistant Director
Onondaga Center for Retarded Children
600 South Wilbur Avenue
Syracuse, New York 13204

AQUATICS

Trainable Mentally Retarded
Hearing Impaired

Primary
Intermediate

Preliminary Note

A swimming instructor can do much to help handicapped children and youth if he has initiative, imagination, patience, and a firm belief that "ability, not *dis*ability counts." In addition, he must be constantly alert to the safety of his pupils. Many of them will have to depend upon him for support, at least in the beginning, so the instructor should be sure that they are comfortable and safe as he gradually enables them to become more independent.

Ideally, an instructor should work with only one pupil at a time in a swimming program for the handicapped. If this is infeasible the instructor might develop a corps of teaching assistants and assign one pupil to each person. In this way, he could supervise the entire program and still provide individual attention by moving from pupil to pupil — helping, advising, and/or responding to specific questions and observations from the assistant in charge. Regardless of the teaching arrangements, however, one of the most important elements in a successful swimming program is the relationship between the teacher and the learner(s). Of necessity, that relationship will include a balance between dependence and independence; but the instructor who genuinely likes his pupils, who tries to know them as individuals, and who finds strengths as well as weaknesses in them, will create a closeness and rapport that cannot help but enhance the learning situation. In time, the disabilities will fade and the abilities will bloom.

There are three basic problems for beginners:

- Making the necessary physical and mental adjustment to water;
- Maintaining a good position in the water; and
- Having sufficient practice in this position to establish a pattern of movement.

For pupils who have difficulty with balance and/or certain types of physical disability, it may be helpful to use floatation devices. In any case, from the moment he enters the swimming area, the pupil should be developing basic skills and attitudes that will make safety habits *automatic* when he is in, on, or around the water. These include:

- Breath control (mouth breathing, breath holding, and rhythmic breathing)
- Prone float and recovery
- Back float and recovery
- Turning over
- Changing directions
- Entry to and exit from the water

In general, there is no specific order or timing for these skills; but they should be introduced as early as possible, and reviewed often enough to become part of the pupil's way of life when he is near the water.

Swimming is an excellent activity for most handicapped persons. Because it involves every major muscle group of his body in rhythmic movement, the pupil who regularly participates in a swimming program will develop greater strength, cardiovascular efficiency, neuromuscular coordination, and general fitness. The buoyancy of water often permits a person with physical disabilities to do things he could not do without that kind of free support, and thus enables him to acquire skills and to reach levels of achievement that equal or even surpass those of nonhandicapped persons. He may also develop a degree of self-confidence and independence he might not otherwise have. Finally, because swimming is a group as well as an individual activity, and because it is one of the most popular lifetime sports, it offers the participant a valuable opportunity for social growth and development. Accordingly, a well designed swimming program for handicapped children should enable them to:

- Swim reasonably well,
- Build and maintain at least a minimum level of physical fitness,
- Develop a positive self-concept and improved social acceptability, and
- Acquire skills that can be used throughout life.

Such a program will include careful orientation to water, familiarization with the effects of buoyancy, fundamental swimming and water safety skills, and more specialized instruction in various styles of swimming. The following models were adapted from *Swimming Programs for the Trainable Retarded*, a publication of the Canadian Association for the Mentally Retarded.

UNIT I

Goal: Developing orientation to water

Objective	Learning Experience	Resource
The pupil demonstrates a safe way of entering the water.	• Enter the water with the pupil, encouraging and reassuring him if necessary. If he is afraid, try to gain his confidence, put him at ease, and convince him that it will be a pleasurable experience. Then lead him into shallow water and involve him with yourself and others in a game situation.	
The pupil demonstrates increased self-confidence.	• Walk through the water with the pupil. Some handicapped children may have very poor balance at first. The unaccustomed buoyancy of his body and the motion of the water, coupled with unsure footing and his own fears, may cause a child to lose his balance and fall underwater — an experience which will frighten him even more and which could produce long lasting effects. • Once the pupil has become fairly comfortable in water, put him into a front float position, with his arms stretched out in front. Grasp his hands gently, but firmly; and pull him short distances through the water. *Never allow pupils to tow one another at this stage*, because they quite often tow underwater. Use floatation devices only if necessary. Then place the pupil in a back float position, with his arms relaxed at his sides. Grasp his arms above the elbows, holding him securely, and tow him short distances through the water. Again, do not allow pupils to tow one another at this stage, and use floatation devices only if necessary. These activities are preparatory to the development of propulsion skills.	

Objective	Learning Experience	Resource
The pupil demonstrates the ability to hold his breath and put his whole face in the water.	• Standing in shallow water near the side of the pool, soak a washcloth and wash your face. Have the pupil repeat your action, but be certain that he will not fall underwater as he does so. Play games with the cloth (squeezing it above your head, letting it slide down your face while soaking wet, etc.), and have the pupil do the same until he becomes accustomed to the feel of water on his face. As you play with the cloth, hold your breath and gradually bring your face closer to the water until parts and then all of it is in the water. Have the pupil repeat your actions. • Using body awareness techniques in a game-like atmosphere, gradually lead the pupil to duck underwater without fear. Demonstration, imitation, repetition, and lots of praise and encouragement will be needed.	Washcloths
The pupil demonstrates the beginning stages of rhythmic breathing.	• Continuing the atmosphere of fun, hold your breath and put your face in the water. Then blow bubbles. Alternate holding your breath and blowing bubbles with your face in the water, by pretending you are a canoe and then a noisy motor boat. Have the pupil do the same. • Help the pupil to develop rhythmic breathing by doing bobbing activities. With your feet apart and planted firmly on the deck, extend your arms to the sides at shoulder level, inhale, bend your knees, and exhale. Have the pupil complete the cycle with you at least six times. When he seems fairly comfortable with it, repeat the action in the water. Then play circle games.	
The pupil demonstrates the ability to open his eyes underwater and to coordinate his hand and eye movements.	• Place brightly painted hockey pucks or other colorful, weighted objects on the bottom of the pool in an area where the water is a little less than chest-deep for the pupil. Then, using a game like searching for buried treasure, have the pupil jump up, bend his knees, squat on his heels underwater, retrieve one or more of the objects, and surface again.	Brightly colored hockey pucks

UNIT II

Goal: Developing body buoyancy

Objective	Learning Experience	Resource
The pupil demonstrates further accommodation to water, improved balance, and introductory propulsion skills.	• Using two flutterboards (one under each arm) to give him confidence, teach the pupil to flutterkick. Then have him assume a good front float position, with his arms extended before him and his hands holding onto a single board. Ask him to flutterkick for a short distance, then longer ones, and finally across the pool — putting his face in the water, if possible, and lifting or turning it for breathing. Have him pretend he's a motorboat and/or stage races back and forth across the pool.	2 flutterboards

Objective	Learning Experience	Resource
	• Then have the pupil assume a good back float position, with his stomach up and his head pressing against a flutterboard held firmly in both hands. Grasp the pupil by his upper arms and tow him. Then have him flutterkick for a short distance, for longer ones, and finally across the pool, in a game-like atmosphere.	
The pupil demonstrates a growing ability to relax and let the water buoy him up.	• Demonstrate a turtle tuck. Take a breath; bend your body at the waist, hugging your knees to your chest in a tuck position; put your face in the water; hold your breath; and let your back break the surface of the water. Then have the pupil do a turtle tuck.	
	• Demonstrate a jellyfish float. Stand in chest-deep water with your feet a shoulder's width apart and firmly planted on the floor of the pool. Then take a breath, slide your hands down your legs, and grasp your ankles. Your feet will leave the bottom of the pool and your back will break the surface of the water. Then have the pupil do a jellyfish float, holding him firmly with one arm around his waist until he gains confidence.	
The pupil demonstrates the ability to do a front float.	• Holding onto the side of the pool or a rung of the ladder, demonstrate a good front float position; then raise your hands and float free. Ask the pupil to do the same. Do a jellyfish float, and then extend your arms forward and your legs back in a good front float position. Have the pupil do the same, but take his hands and gently tow him to help maintain balance and a feeling of security. Gradually release his hands, allowing the pupil to float free; then help him to his feet.	
The pupil demonstrates the ability to move from a front float to a standing position.	• Assume a good front float position. Then – in one smooth motion – lift your head, tuck your knees up near your chest, sweep your hands back to your hips, straighten your legs, and stand up with your feet on the bottom of the pool. Have the pupil do the same, repeating the activity as often as necessary.	
The student demonstrates the ability to do a front glide.	• Demonstrate a front glide. Stand near the side of the pool and then crouch until the water just clears your shoulders. Then raise your arms above your head, take a deep breath, put your face in the water, push off, and extend your body in a long glide. Have the pupil do the same, gliding to you, to another person, or to an object in the pool. Create a game situation that will enable him to practice his glides while having fun.	
The pupil demonstrates the ability to do a back float.	• Demonstrate a back float. Then help the pupil to assume a good back float position, supporting him until he seems to feel fairly secure as he lies on his back in the water. Gradually remove your support, allowing the child to float free; then help him to his feet.	

Objective	Learning Experience	Resource
	Back floats are difficult for most pupils, because they feel helpless in the basic position and, if the water is not perfectly still, they may get some on their face, in their eyes or nose, etc. Stress holding the breath and keeping the hips up, the head well back, and the hands at the sides for balance.	
The pupil demonstrates the ability to move from a back float to a standing position.	• Assume a good back float position. Then — in one smooth motion — lift your head, tuck your knees up near your chest, push with your arms, straighten your legs, and stand up with your feet on the bottom of the pool. Have the pupil do the same, repeating the activity as often as necessary.	
The pupil demonstrates the ability to do a back glide.	• Demonstrate a back glide. Stand near the side of the pool and then crouch until the water just clears your shoulders. Then, with your arms along your sides, take a deep breath, hold it, rest back into the water, push off, and extend your body in a long glide. Have the pupil do the same, gliding to you, to another person, or to an object in the pool. Then show the pupil how to do another form of the back glide. Pressing your body against the side of the pool, stand "straight like a soldier" with your arms extended above your head; take a deep breath and hold it; pull your stomach in; push off from the bottom of the pool; and slide back through the water, your arms falling to the sides for balance. Have the pupil do the same. Mark the distance he is able to glide. Set some targets for him to meet. Alternate front and back glides. Have him compete against himself or others *in an atmosphere of fun*. With practice, his confidence, his skill, and the distance he can glide will increase.	
The pupil demonstrates the ability to change the position of his body while moving through the water.	• Assume a front glide position and then show the pupil how to roll over from front to back by turning your head in the direction of travel, pulling the arm that is closest to your face across your stomach, rolling over on your back, and extending your arms to the sides for balance. Help the pupil to do the same; then have him practice the movement until he can do it easily and with confidence. • Reverse the procedure. With your body in a good back float position, turn your head in the direction of travel, pull the arm that is closest to your face down and across your stomach, roll over on your stomach, and stretch your arms forward into the front glide position. Help the pupil to do the same. Alternate front-to-back and back-to-front rolls until the pupil can do both movements easily and well. Lead him to understand, through his own experience, that he can rest by floating on his back.	

SOME HELPFUL HINTS FOR WORKING WITH CHILDREN WHO HAVE HEARING HANDICAPS

Characteristics

Hearing impairments range from total deafness to the inability to hear particular sounds, sound levels, or sound combinations. Children who are handicapped by hearing impairments:

- Are visually oriented — "the ears of a deaf child are his eyes."
- May have problems with balance or equilibrium.
- May communicate
  orally, through speech and lipreading, if the impairment is not too severe;
  manually, through signs, fingerspelling, or a combination of both, if the impairment is either total or severe; or
  orally *and* manually.
- May feel isolated, rejected, or unable to reach others.

Recommendations

- Determine the degree of impairment before you begin to work with the child.
- Be sure that he is facing you and that you have his full attention as you teach.
- Demonstrate virtually everything you attempt to teach.
- Use manual directions as often as possible.
- Enunciate clearly, and supplement your verbal directions with manual interpretations.
- Group children with hearing impairments together for some activities, and include them with nonhandicapped children for others — depending upon the particular situation.
- Try to accommodate to the special needs of handicapped children as unobtrusively as possible, enabling them to feel that they are "just like the other kids."

* * * * * *

Swimming for the Handicapped: Instructor's Manual (Washington, D.C.: The American National Red Cross, 1960) is a useful guide for developing effective programs in aquatics for children with various types of disability.

Emilio DaBramo
Director of Physical Education
Mamaroneck Public Schools
1100 Palmer Avenue
Mamaroneck, New York 10538

BASIC CONDITIONING EXERCISES FOR GYMNASTICS

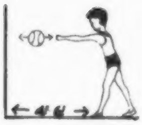
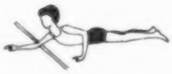
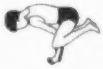
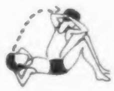
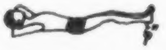
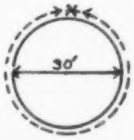
Educable Mentally Retarded
Trainable Mentally Retarded

Intermediate
Advanced

The following exercises are specifically designed to develop progressions that will foster fitness in children and provide them with a foundation for proficiency in gymnastics:

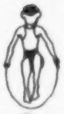
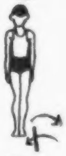
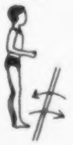
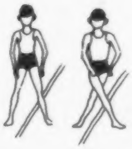
- Leg raising from a supine position
- V-shaped hip stand
- Jackknife from a supine position
- Holding the L
- Tuckups
  - Supine position
  - Sitting position to back, then roll to tuck
- Circle pushups
- Upswings (knee to feet)
- Pinwheels
- Alternate leg kicks
- Tipups or frog stands
- Straddle seats
- Straddle front scales
- Knee arabesques
- Straddle leg stretch, sitting position
  - Center
  - Right and left legs
  - With head touching floor
- Pinwheel toe touching from a supine position
- Toe touching
  - Legs apart, standing position
  - Alternate toes, standing and sitting positions
  - Legs together, standing and sitting positions
  - Legs crossed, standing position
  - Alternate toes, hurdle position
- Head-to-knee touch, standing position
- Height-and-reach jumps
  - Vertical
  - Straddle
  - Pike
  - Tuck
  - Arch
- Front falls
  - Half-bent knee position
  - Pike position
  - Standing position
- Leg raising from a standing position
  - Alternate legs, knee raised to chest
  - Alternate legs raised forward as high as possible in a fully extended position
  - Alternate legs raised to the side as high as possible in a fully extended position
- Heel clicking - front and side
- One-arm circle walks — right and left hand
- Two-arm levers
- Bridging
- Cradling
- One-foot stands with eyes closed — alternate feet
- Half-knee bends on toes with eyes closed — plus 1/4, 1/2, 3/4, or full turns
- Standing broad jumps
- One-leg balancing
  - Front scale
  - Knee lift
  - Leg extension
  - Side scale
  - Combinations
- Side slides — right, left, and alternating
- Skipping — forward and backward, plus leap turns
- Hand-supported kickups — same and alternating legs

As the following guide indicates, many of these exercises can be used in self-testing programs, with 15-second, 30-second, or 60-second periods allotted for each activity.

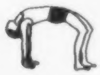
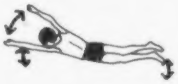
Activity	Procedure		Time Allotment		Score
			Age 3-9	*Age 10-21*	
FOR ARM STRENGTH:					
The wall pass	Standing 4'-6' from a wall, chest-pass an 8½" playground ball to the wall and catch it on the rebound. Repeat as often as possible in the allotted time. Every time you drop the ball, deduct one point from the total score. (For children in lower grades, the distance should be lessened.)		30 seconds	60 seconds	
Line pushups	With your body in a front-leaning rest position, walk alternate hands forward and back across a horizontal line. Count the number of times you cross the line. (The level of difficulty can be lowered by using a kneeling, rather than a front-leaning position.)		30 seconds	60 seconds	
Tipups	Squat on the floor, then press your elbows inside your knees and lean forward until your toes come off the floor and your body weight is balanced over your hands. Hold yourself in this position for as long as possible, up to a minute, and record the time in seconds as your score.		5 seconds	10 seconds	
FOR ABDOMINAL STRENGTH:					
Situps	Lie on your back with your knees bent and your hands clasped behind your neck. Then sit up, touch each elbow to the opposite knee, and return to the original supine position. The activity is complete when the backs of your hands again touch the floor. Record the number of situps you complete during the specified length of time.		30 seconds	60 seconds	
Leg Raising	Lie on your back with your legs straight forward and close together, and your hands clasped behind your neck. Then raise both legs about 6" above the floor and hold them there for the specified length of time.		15 seconds	30 seconds	
FOR LEG STRENGTH:					
Circle running	At a given signal, run around the circumference of a circle measuring about 30' in diameter. Either direction, or alternate directions can be used; and each complete revolution equals one point. Record		30 seconds	60 seconds	

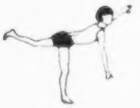
the number of circles you can run in the specified length of time. (The test can also be done as a group activity, with the children forming the circle. In this case, each child completes the revolution from his place in the circle, running in the same direction as the others in the group and passing only on the outside.)

FOR COORDINATION AND AGILITY:

Rope jumping	Keeping your feet together, jump over a #8 jumprope as many times as you can during the specified length of time. Record your score.		30 seconds	60 seconds	____
Line jumping — side to side	Stand beside a line and then, keeping both feet together, jump from one side of the line to the other without touching it. Give yourself one point for each jump you make during the specified length of time.		30 seconds	60 seconds	____
Line jumping — front to back	Stand behind a line and then, keeping both feet together, jump forward and backward across the line without touching it. Each jump equals one point. Record the number of points you make during the specified length of time.		30 seconds	60 seconds	____
Line jumping — alternate feet	Straddle a line with your feet. Then jump into the air, cross your right leg in front of the left, and land with your feet on opposite sides of the line. Jump again to resume the original straddle position. Repeat the activity, this time crossing your left leg in front of the right. Count the number of jumps you can make in the specified length of time.		30 seconds	60 seconds	____

FOR FLEXIBILITY:

Bridging	Lie on your back with your arms at your sides and your legs together, pointing forward. Draw your knees up until your heels touch, or almost touch, your buttocks. Then bend your elbows until your hands are close to your ears, the palms flat on the floor and the fingers pointing forward. Using your hands and feet as a base, form a high arch with your body and hold the position as long as possible within the specified length of time. Record the number of seconds as your score.		15 seconds	30 seconds	____
Cradling	Lie flat on your stomach, with your arms extended straight in front and your legs extended straight in back. Then arch your body by reaching upward front and back, without bending your arms or your		15 seconds	30 seconds	____

	legs. Hold the position as long as possible within the specified time, and then relax. Record the number of seconds as your score.				
FOR BALANCE:					
Front scale	Stand straight with your feet together and your arms at your sides, palms toward your thighs. Then reach forward and outward as you lift one leg and extend it straight back until it is nearly parallel to the floor. Hold your body in balance for as long as possible within the specified time, and then resume the original position. Repeat, using your other leg as a base. Your score equals the number of seconds you can keep your balance in the front scale position.		15 seconds	30 seconds	____

Robert N. Lane

Supervisor of Physical Education and Recreation
Arthur Brisbane Child Treatment Center
Farmingdale, New Jersey

LEAD-UP SKILLS FOR GROUP GAMES AND TEAM SPORTS

Emotionally Disturbed
Intermediate

UNIT I

Preliminary Note

Physical education must proceed slowly with emotionally disturbed children, and it may be necessary for a child to begin his activity in this field with an adult as a partner. Actual demonstrations by the teacher often prove helpful because children with emotional handicaps usually have difficulty in conceptualizing; but these should supplement, rather than replace, the child's opportunity to *learn by doing*. In addition, the following guidelines should be observed:

- Disturbed children need clearly defined structure and routine in their activities.
- The activities should be geared to the social and physical maturity of the participants, and kept on a noncompetitive basis until the children develop confidence in themselves and in others.
- The teacher should be aware of his pupils' limited attention span, alert to the mood of the group, and sensitive to the length of time an activity should last.

In the activities described below, the teacher will find that using several balls will enable him to form a number of small groups; and these, in turn, will help the children to relate to one another and provide more body movement for those who are hyperactive.

Goal: Developing gross motor skills through pre-soccer training

Objective	Learning Experience	Resource
The pupil demonstrates the ability to kick a ball with a soccer-style instep kick.	• Demonstrate a soccer-style instep kick and explain that no hands can be used when playing soccer. Then place the children in shuttle relay formation, with columns facing each other. Have the first child on each squad kick the ball to the teammate across from him and then go to the end of the line. Keep the lines not more than 10' apart at first, and stress accuracy. Move the lines farther apart as the children develop skill. Explain how to trap the ball softly to control it, and set up the kick.	Several soccer balls
The pupil demonstrates the ability to pass a soccer ball.	• Have the children pick a partner and dribble the ball around the perimeter of the play area, passing it back and forth as they go. Stress using different areas of the foot and passing to the open area ahead of the receiver.	Several soccer balls 4 highway cones
The pupil demonstrates the ability to use his feet to control a ball while changing directions quickly.	• Divide the children into two or more lines with the front child in each line having a ball at his feet. Have them dribble the ball forward on a signal, and change direction at subsequent signals. When told to bring the ball in, have them pass it to the front man in line and go to the end. Varying the intervals between changes of direction adds to the fun.	Several soccer balls Whistle

Objective	Learning Experience	Resource
The pupil demonstrates the ability to dribble a soccer ball.	• Divide the children into two or more lines, each facing a line of cones. Then have each child dribble the ball in and out between the cones, pass it to the next player, and go to the end of the line. After practice, this can be done as a relay race or individually timed in comparison with a player's previous score.	Several soccer balls 12 highway cones Stopwatch
The pupil demonstrates the ability to head a soccer ball.	• Arrange the children in circles with a leader in the center of each circle. Have the leader toss the ball to each player, who then "heads" it back . . . and so the game goes on.	Several soccer balls

UNIT II

Preliminary Note

A physical education program in which the levels of competition are carefully controlled can be very effective in helping emotionally disturbed youngsters to cope with the competitive aspects of everyday living, if the following guidelines are observed:

- Help the children to develop confidence in themselves and in others, for many of them will have experienced only failure and frustration.
- Make sure that the activities are enjoyable enough to make the children *want* to participate.
- Plan activities and experiences that will help the children to develop socialization, concentration, and direction-following skills.
- Consider each child as an individual, involving him in low-level competitive activity *only after he has demonstrated emotional readiness*.
- Encourage the feeling that participation and cooperation are more important than winning, so the children will enjoy their activities even if they lose or if the levels of competition are too high.

The following model may prove helpful.

Goal: Developing motor coordination through prebasketball training

Objective	Learning Experience	Resource
The pupil demonstrates the ability to chest-pass a ball.	• Have the class line up with the children facing you and then demonstrate proper chest-passing and catching techniques, without using a basketball. Pass an imaginary ball back and forth with the children, stressing proper form. Repeat with a ball.	One basketball
The pupil demonstrates the ability to catch a ball properly.	• Have the class form two or more circles and prepare to chest-pass the ball around the circle as fast as possible. Each time the ball returns to the first child, have him call out the number of the round. The first team to complete 10 trips is the winner. This can also be done as one large circle relay in which the group competes against itself by keeping time on a stopwatch.	Several basketballs Stopwatch

Objective	Learning Experience	Resource
The pupil demonstrates the ability to dribble a ball.	• Have the players form two columns, each column facing the other with approximately 50' between them. The first player dribbles across, looking for a player who points up as a signal for a chest pass or down as a signal for a bounce pass. The first player passes and then goes to the end of the line. The relay continues in the same fashion.	Several basketballs
The pupil demonstrates the ability to use passing, catching, and dribbling skills while moving about quickly.	• Play "Catch 10." Divide the players into two teams. Then start the play with a center jump, and loosely follow the rules for basketball. The object of the game is to have a team catch 10 consecutive passes without dropping one or having it intercepted. Each time a player catches the ball, he calls out the number of the catch. A player who is fouled takes the ball out of bounds and receives one penalty point.	One basketball Colored shirts or arm bands to identify teams
The pupil demonstrates the ability to work successfully as part of a group.	• As the players master the fundamentals of the game, additional pre-basketball skills such as dribbling and bounce-passing can be added.	

UNIT III

Preliminary Note

Few emotionally disturbed children have experienced success in everyday play groups in their own neighborhoods. Although they have considerable potential, most of these youngsters have not developed the average American child's skill at throwing, catching, batting, and general team activity, because of their social and emotional handicaps; and their weakness in these areas tends to reinforce already poor self-images and lack of confidence. However, the teacher can do much to:

- Help each child to develop a feeling of acceptability in his group by providing him with opportunities for gaining the necessary skills for social acceptance;
- Develop the child's confidence in himself by reinforcing good performance with encouragement; and
- "Structure for success" by planning activities which are challenging enough to develop skills, but not so difficult that they produce frustration.

In pre-baseball activities like those described in the following model, safety must be a primary concern. The fear of being struck by a hard ball is difficult to overcome; but the teacher can avoid the problem by using special safety equipment (e.g., sponge rubber balls, plastic balls and bats, crocheted balls stuffed with nylon, and batting tees) until sufficient skill has been developed.

Goal: Developing eye-hand coordination through prebaseball training

Objective	Learning Experience	Resource
The pupil demonstrates the ability to throw overhand accurately.	• Demonstrate proper throwing form and have the pupils mimic the movement without a ball. Then divide the group into pairs. Ask the partner-pairs to share a sponge rubber ball and spread out around the area to practice throwing alternately against a wall for several minutes.	Several sponge rubber balls Wall space Gym marking tape to outline a strike zone and hash marks

Objective	Learning Experience	Resource
	• Play "Wall Target Ball." Have the players line up in single file, facing a strike zone target on a wall, 8' away. The first player throws at the target and, if he hits it, backs up one mark to throw again. He repeats the procedure until he misses. When he misses, he sits down to the left of the last numbered hash mark where he was successful; and the next player throws. The object of the game is for each player to work his way to the line farthest from the wall. The players must remember their proper throwing order. To avoid discouraging the less skillful players, change the rules and play "catch-up time." In this way, each player throws until he hits the target, and then moves back one mark and lets the next player throw.	on the floor in front of the target
The pupil demonstrates the ability to catch a ball.	• Play "Back Away." Demonstrate proper catching technique and then divide the group into pairs. Have the partners in each pair face each other about 5' apart and share one ball. Each of the first players then throws the ball overhand to his partner. If the partner catches it, he backs up one step and returns the ball to the first player. When anyone misses, he squats at that place and continues to throw the ball to his partner until all the players in the group have missed. Then all stand and try to "back away" farther.	Several sponge rubber balls
The pupil demonstrates the ability to swing properly and to hit a still ball. The pupil also learns the rules of softball by playing a game which requires fewer skills.	• Play "Tee Whiffleball." Demonstrate the basic techniques of batting. Then divide the players into several small groups to take a stance and three practice swings. Select two teams to play "Tee Whiffleball." The rules are the same as those in softball, except that the ball is hit from a tee. No bunting, stealing, or sliding is allowed.	Whiffleball Several plastic bats 4 rubber bases Batting tee
The pupil demonstrates the ability to hit a slowly pitched ball.	• Play "Paddle Ball." Divide the players into two teams and proceed as in softball, but using a large ball, and a large bat. The pitch must bounce once before a line in front of home plate. This will force the pitcher to throw slowly (overhand). A pitch which reaches this line without bouncing is an automatic walk. Balls and strikes are called with three balls a *walk* and two strikes of any kind (even fouls), an *out*. This speeds up the tempo of the game.	Volleyball Paddle 4 rubber bases
The pupil demonstrates the ability to throw a ball quickly and accurately and to catch it skillfully.	• Play "Around the Corner." Divide the players into two teams. The team in the field has a player at home and at each base, with extras backing up the bases. At a signal, the first player from the batting team runs around the bases as quickly as possible. The catcher throws to the player on first, who throws it to the player on second, and so on around the bases. The runner tries to score before the ball has been caught at every base and home. As skill improves, require the team in the field to throw around twice and lengthen the bases. This game generally indicates whether a child is ready to play softball or baseball safely and successfully.	Soft "mush" ball 4 rubber bases

James DeBell

Director of Health and Physical Education
Jefferson High School
Edgerton Park
Rochester, New York 14608

Severely Physically Handicapped

Intermediate
Advanced

UNIT I

Goal: Improving motor coordination and control (range of motion within limitations)

Objective	Learning Experience	Resource
The pupil demonstrates a degree of motor coordination by propelling a balloon ball over a net with various parts of his body.	• Play a game of modified volleyball. Divide the class into two teams, and arrange the players in their wheelchairs on either side of a volleyball net or its equivalent. Explain the object of the game and the procedures to be followed (e.g., hitting the ball with both hands, the right hand only, the left hand only, both feet, the right foot only, the left foot only, the head). Change the rules frequently to keep the game moving, to keep the players alert, and to make sure that all appropriate parts of the body are used.	A volleyball net or a rope tied to two poles A punch ball Several wheelchairs
The pupil demonstrates a finer degree of motor coordination by propelling a balloon ball over a net with a badminton racquet.	• Vary the game described above by requiring the players to propel the ball back and forth across the net with badminton racquets.	The materials listed above plus badminton racquets
The pupil demonstrates a degree of motor control by increasing the number of times he can hit the ball before sending it over the net.	• Gradually increase the number of times a player must hit the ball before he sends it back over the net.	Same as above, with or without badminton racquets
The pupil demonstrates improved motor coordination and control through teamwork.	• Increase the number of players who must hit the ball before it is sent over the net (e.g., player 1 to player 2, player 1 to player 2 to player 3, etc.).	Same as above, with or without badminton racquets

UNIT II

Goal: Improving motor coordination and control through the development of prebasketball skills

Objective	Learning Experience	Resource
The pupil demonstrates the ability to pass a ball to	• Set up a goal at opposite ends of a gym or playing field. Then divide the class into two teams. Explain the object of and procedures for	2 goals A handball

Objective	Learning Experience	Resource
his teammates while in motion.	playing team handball, demonstrate how to pass a ball from one teammate to another, and give the players an opportunity to practice the technique. Arrange the teams on either side of a center line, and play ball. Each team must defend its own goal and advance toward the opposite goal by passing.	Wheelchairs
The pupil demonstrates the ability to dribble a ball while in motion.	• Show the players how to dribble a ball, and give them an opportunity to practice bouncing the ball once with every turn of the wheels of their chairs. Resume play, having the players dribble the ball when they cannot pass it as they move toward the opposite goal.	Same as above
The pupil demonstrates the ability to propel a ball into a net.	• Show the players how to score by throwing, striking, or batting a ball into the goal. Give them an opportunity to practice, and then resume play. Gradually raise the goals until the game can be played with modified basketball rules and procedures. Include scoring.	Same as above

UNIT III

Goal: Improving motor coordination and control through the development of prehockey skills

Objective	Learning Experience	Resource
The pupil demonstrates the ability to propel a ball across the floor with a hockey stick.	• Explain the object of and the procedures for playing floor hockey. Then divide the class into two teams and appoint a goalie, defensemen, and attackers. Show the players how to propel a ball across the floor with a hockey stick, and give them an opportunity to practice. Work toward improved coordination and control. Then arrange the players on either side of a center line, and play ball.	2 goals A small rubber ball Plastic hockey sticks Wheelchairs
The pupil demonstrates the ability to pass a ball to his teammates while in motion.	• Give the players an opportunity to practice their passing techniques and then resume play, limiting the time and the distance a player may wheel his chair before passing the ball.	Same as above
The pupil demonstrates the ability to adapt his movements to changed circumstances.	• Have the players change positions so that each will gain experience as goalie, defenseman, and attacker. Emphasize the differences in the functions, strategies, and movements required for each of these roles; and give the players ample opportunity to adapt their efforts to the new positions.	Same as above
The pupil demonstrates a knowledge of game strategy and an increased ability to adapt his efforts to changed circumstances.	• Explain, demonstrate, or show through film how the passing, striking, and scoring skills used in floor hockey can be adapted for field hockey, ice hockey, soccer, and/or lacrosse. Then play a game of modified soccer by having the players propel a larger ball with their hands or feet, rather than with hockey sticks.	A larger, soccer-style ball

Martilu Puthoff

CORRECTIVE, DEVELOPMENTAL, AND RECREATIONAL ACTIVITIES

Chronic Respiratory Conditions

Associate Professor of Physical Education
State University College at Brockport
Brockport, New York 14420

Primary
Intermediate
Advanced

Preliminary Note

Children of school age suffer from a number of chronic physical conditions which limit their activity and affect their motor performance. Among these are such respiratory ailments as allergies, hayfever, chronic bronchitis, bronchial asthma, and cystic fibrosis. Functionally, they range in degree from slight, with very little disability, to severe and intractable.

At one time, children with respiratory problems were automatically excused from physical education in the fear that the exertion required for exercise and activity might precipitate an attack and/or contribute to the severity of the condition. However, experimental programs have shown that active participation in carefully planned physical fitness training and recreational activities is of great value — both physically and psychologically — to *all* children, regardless of handicap. For this reason, many doctors recommend that the restrictions on physical education for children with chronic respiratory conditions be lessened and that, between attacks, they be given the same opportunity to benefit from physical fitness and recreational activities as children without these disabilities.

Because the functional range of children with respiratory conditions is quite broad, programs in physical education should be tailored to their individual needs and capabilities. In each case, however, the program should have dual emphases:

- The first of these is primarily developmental. That is, the program should provide or be an extension of the therapy designed for the child's condition and would therefore include such activities as breathing exercises; conscious practice in relaxation; and ways of building strength and endurance in the muscles of the trunk, shoulder girdle, and abdomen. The work load intensity for a child with respiratory ailments will be less than that for other children in almost every case; but once a physician has determined the pupil's exercise tolerance, the doctor and the physical education teacher will be able to plan a program geared to his particular capabilities.
- The second emphasis should be on recreational activity in a combined program setting. It is important for the child to participate as much as possible with the members of his peer group, without feeling inferior to or different from the other children.

The three model units described on the following pages relate to the developmental aspect of the program. Improved ventilation and efficient breathing patterns, controlled relaxation, improved fitness and endurance levels, and the prevention of postural deviations and loss of trunk mobility common to children with chronic respiratory conditions have been identified by physicians as primary goals in preparing these children to acquire the necessary skills for selected sports activities which will enable them to participate successfully with their peers. The techniques used in the models are intended to accomplish the following ends:

- To help the child to understand the nature of the goals that have been defined in the three units;
- To provide opportunities for the child to develop an awareness of the changes in the quality of movement as he works toward the stated goals;
- To use motivational devices and goal-oriented activities to reduce the boredom which is inherent in most developmental activities;
- To infuse developmental breathing exercises into practical movement experiences for carryover value;
- To foster a growing independence in the child as he begins to understand and progress toward the achievement of the stated goals; and
- To provide opportunities for children to work together in pairs and groups as well as to compete against each other.

UNIT I

Goal: Developing improved ventilation and more efficient breathing patterns

Objective	Learning Experience	Resource
The pupil demonstrates a knowledge of forced expiration volume.	• Define forced expiration volume, describe how it can be improved, and explain why it should be improved in children with chronic respiratory conditions. Then measure each child's forced expiration volume in the following test, and have him record the results on his own Forced Expiration Volume Chart. The score will serve as a pretest and as the first entry on a motivational progress chart. BREATHING EXPIRATION TEST *Position:* The test may be given with the pupil in any of several positions, depending upon the facilities available and the age of the children. For example, the child might lie on his back with his knees bent, his feet flat on the floor, and his arms to his side. Or he might sit crosslegged on the floor, or stand. *Procedure:* The pupil takes a deep breath, drawing the air slowly and quietly through his nose; and then exhales as slowly as possible through his mouth, making an *F* or an *S* sound as the air passes between his teeth. *Measurement Technique:* The FEV or Forced Expiration Volume is indicated by the number of seconds between the beginning and the end of the expiration sound. Record the best time in three trials. The procedure for the test varies with the age of the subject. - Very young children should be tested individually by the instructor or a competent assistant. - If the children are old enough, they can work in pairs and test each other. As one child goes through the test, the other can listen for the hissing sound and record the second when the sound seems to stop. In this case, the instructor or a competent assistant should count the seconds aloud with the aid of a stopwatch. - Older children can work in teams and time their own tests with a stopwatch assigned to each team.	A Forced Expiration Volume Chart for each child and a pencil for each team of tw children working together At least one stopwatch
The pupil demonstrates the ability to expand and contract the lower portion of his chest during inspiration and expiration.	• Using a selection of the following exercises, encourage the children to become *kinesthetically* aware of the difference in breathing when the lower lung areas are utilized in inhalation and exhalation.	

Objective	Learning Experience	Resource
	EXERCISE 1 *Position:* Sitting relaxed in a chair or crosslegged on the floor, with the palms of the hands on either side of the lower ribs *Activity:* Exhale slowly through the mouth, contracting the upper part of the thorax as much as possible and then contracting the lower ribs. Continue until the thorax is compressed between the palms and the air is expelled from the bases of the lungs. Inhale, expanding the lower ribs against slight pressure of the hands. The hands are kept in place at all times, and the arms and shoulders are relaxed except when needed for pressure. Repeat.	
	EXERCISE 2 *Position:* Lying in a supine position with the knees flexed and the feet flat on the floor *Activity:* Wrap a folded towel around the lower chest; then cross the arms across the chest, and grasp the ends of the towel. Inhale through the nose, trying to elevate the chest only. Then pull the towel tight and exhale through the mouth with a slow, hissing sound. Repeat. *Note:* The teacher should call attention to the feeling of filling and emptying the lower chest area as well as the upper thorax. Vocabulary and teaching techniques should be adapted to the ages of the children.	Towels or belts
The pupil demonstrates the ability to breath diaphragmatically through the successful retraction of abdominal muscles during expiration.	• Utilizing the following exercises, encourage the children to feel and become aware of the proper movements of the chest and abdomen in diaphragmatic breathing. Call attention to the gently sinking chest and upper abdomen. EXERCISE 1 *Position:* Lying in a supine position with the knees bent and one hand resting on the upper portion of the abdomen *Activity:* Exhale slowly while gently sinking the chest and the upper abdomen until they are well retracted at the end of expiration. Inhale briefly through the nose while relaxing the upper part of the abdomen until it bulges slightly. (The pupil should be able to feel the bulge with	

Objective	Learning Experience	Resource
	his hand on his abdomen.) The chest should not be raised. Repeat. EXERCISE 2 *Position:* Sitting in a chair with the arms relaxed at the sides *Activity:* Slowly flex the body toward the floor at the waist, while exhaling slowly through the mouth. (At maximum position, the pupil should feel his abdomen contract and the upper part of his chest act as resistance against his abdomen.) Sit up again, slowly, inhaling through the nose. Hold at the sitting position, and then repeat.	
	EXERCISE 3 *Position:* Lying in a supine position with the knees flexed, the feet flat on the floor, and a sandbag on the stomach (above the waistline and below the sternum) *Activity:* Lift the sandbag by inhaling for a count of two and then exhale with a hissing sound to a count of six, to discover which muscles should be used in correct abdominal breathing. Repeat.	A sandbag or a heavy beanbag (maximum 2 lbs.)
The pupil demonstrates the ability to check his forced expiratory volume after exercises.	• Have the pupil take the Breathing Expiration Test to measure his forced expiration volume and then record the results on his FEV Chart. Use the best time in three trials. Then have him draw a line between the dot which indicates his FEV *before* exercise and the dot which indicates his FEV *after* exercise. If the pupil has a higher Forced Expiration Volume after exercise than he had before, it is permissible to repeat the exercises as a means of increasing rates of tolerance.	A stopwatch and a ruler
The pupil demonstrates the ability to prolong and control expiration during activity.	• Use any of the following goal-oriented activities to give additional practice and to measure ability: - Balloon-blowing contests - Candle-blowing contests - Contests in which the pupils blow ping-pong balls across a table	Balloons A stopwatch Ping-pong balls Candles

UNIT II

Goal: Improving the breathing pattern while engaging in general fitness activities needed for the acquisition of skills in selected sports

Objective	Learning Experience	Resource
The pupil demonstrates the ability to do rhythmic breathing during moderate upright locomotion.	• Have the children sit crosslegged in various places around the room. Then reinforce the activities described in Unit I by explaining the rhythmic pattern to be used in breathing. Ask them to practice inhaling through the nose to the count of two and exhaling through the mouth with a hissing sound to the count of six.	
	• Have the children walk or march to even rhythms, inhaling for two steps and exhaling for six. Adjust the tempo of the accompaniment to the exercise tolerance of the children. If faster rhythms are chosen for more vigorous exercise, then the number of steps needed for inhalation and exhalation will increase; but the *ratio* between the two phases of breathing must be retained, for the drawn-out exhalation is important.	Percussion instruments or music with an even rhythm
The pupil demonstrates the ability to utilize the tempo and rhythm of a breathing pattern while doing upper back exercises for the prevention of postural deviations associated with chronic respiratory conditions.	• Demonstrate the following exercises, and explain how breathing is rhythmically associated with the various movements. Set the rhythm as before: two counts for inhaling and six counts for exhaling. Then have the children breathe in this pattern as they do any or all of the exercises described below.	
	EXERCISE 1 *Position:* Sitting on a stool with the back and the back of the head against a wall, the arms extended to the sides at shoulder level and bent upward in a 90° angle at at the elbows, and the backs of the hands against the wall *Activity:* Keeping the backs of the hands against the wall, move the arms outward and upward into a full stretch while inhaling through the nose to a count of two. Then slowly return to the beginning position while exhaling through the mouth with a hissing sound to the count of six. Repeat. Once the children can maintain the 2/6 breathing pattern while doing the exercise, encourage them to establish their own rhythms; but be sure that the inhalation time is short and the exhalation time is prolonged. Make a game of the activity by seeing who can make the hissing noise for the longest period of time during three repetitions of the exercise.	
	EXERCISE 2 *Position:* Lying in a prone position with the hands in the small of the back, palms upward. The head should not move during the exercise. *Activity:* Keeping the hands in the small of the back, raise	

Objective	Learning Experience
	the elbows and shoulders while inhaling through the nose to a count of two. Hold for one count. Then lower the elbows and shoulders while exhaling through the mouth with a hissing sound to the count of six. Repeat. EXERCISE 3 *Position:* Balanced on hands and knees, with the back flat *Activity:* Inhale through the nose to a count of two while raising the left arm and stretching it forward, and lifting the right leg and stretching it backward. Accentuate the inhalation, and work for good extension on the stretch. Return to the original position while exhaling through the mouth with a hissing sound to the count of six. Ask the children to work toward *total exhalation* — a condition that requires so tight a contraction of the abdominal muscles that it produces a "cat hump" in the spine in the final position. Repeat the activity, using the right arm and the left leg.
The pupil demonstrates the ability to utilize tempo and rhythmic breathing patterns while doing abdominal exercises.	· Demonstrate the following exercises with the 2/6 breathing pattern, and then have the children try them. Discuss the length of the inhalation/exhalation periods, and the ratio between them. If the children are ready for more extended exhalation, encourage them to work at their own pace. If any are having trouble with the pattern, try setting the pace by helping them through some of the exercises, or by doing some of the activities with them. EXERCISE 1 *Position:* Kneeling on the floor with the feet under the hips, the arms outstretched, and the hands and forehead touching the floor *Activity:* Inhale through the nose to a count of two while uncurling the body until it sits back on the feet with the arms stretched overhead. Then return to the original position in a curling motion, while exhaling through the mouth with a hissing sound to the count of six. Complete the expiration phase with a tight contraction of the abdominals in the final curl. Repeat. EXERCISE 2 *Position:* Balanced on all fours, with the back flat and the head dropped forward in a relaxed position *Activity:* Inhale through the nose to a count of two while lifting and extending the left leg and raising the head in a forward thrust. Then bend the neck and the right knee until the body is in a curl position and the nose touches the knee, while exhaling through the mouth to a count of six. Complete the exhalation with a tight contraction of the abdominal muscles in the final curl. Repeat.
The pupil demonstrates the ability to utilize rhythmic breathing patterns while doing abdominal exercises which include breathholding.	· Show the children how to do a bent-leg situp: Lie on your back with your knees bent and your feet flat on the floor. Bring your heels up close to your buttocks. Place your hands on the front part of your thighs, and then move upward until your hands slide over your kneecaps and you are sitting up.

Objective | Learning Experience

Then have the children do it. When they have mastered the exercise, ask them to repeat it, checking the times when they inhale and exhale while doing it. Most of them will inhale before they start, hold their breath during the up phase, and exhale during the down phase. Help them to incorporate the 2/6 breathing pattern into their bent-knee situps by having them:

- Inhale through the nose to a count of two while resting on their backs; and then
- Exhale through the mouth to a count of six — three while sitting up, and three while lying back down.

Repeat the activity as often as necessary to establish an even rhythm.

The pupil demonstrates the ability to utilize rhythmic breathing patterns while doing trunk flexibility exercises.

- Demonstrate, and then have the children perform the following exercises:

EXERCISE 1

Position: Kneeling on the left knee, with the right leg stretched to the side and both hands on the hips

Activity: Inhale through the nose to a count of two while bending to the right and stretching the left arm up and over the head. Return to the original position while exhaling through the mouth with a hissing sound to the count of six. Change to the right knee with the left leg outstretched, and repeat — this time bending to the left and stretching the right arm up and over the head. Alternate.

EXERCISE 2

Position: Balancing on the right hip and the right elbow, with the right fist pressing against the side of the chest wall, the left arm curved overhead, and the legs to the left with the knees bent

Activity: Exhale through the mouth to a count of six while pushing the rib cage toward the left, as the left arm curves farther over the head and forcibly stretches the left side. Then inhale through the nose to a count of two while lifting the body with a quick outward movement of the arms which rolls it into the beginning position on the opposite hip. Repeat the activity from alternate hips.

The pupil demonstrates the ability to use rhythmic breathing during activities which promote endurance.

- Have the children participate in such activities as the following: hops, skips, gallops, walks, jumps, slides, and runs. Since some of these are even and others are uneven in rhythm, incorporate the 2/6 breathing pattern by having the children inhale on two consecutive (skips) and exhale on six consecutive (skips). Other locomotor activities can also be used, if they lend themselves to a count of eight.

Some of the movements might be combined as a "dance" — so long as all of the children are required to move at once and there are no delays in which they can rest. With or without musical accompaniment, the children might do a pattern of activity such as the following:

- *Hop* 8 times on the right foot, and 8 times on the left;
- *Run* 8 steps forward and 8 steps backward;
- *Gallop* 8 times on the right foot in a circle to the right, and 8 times on the left foot in a circle to the left;

Objective	Learning Experience
	- *Run* 8 steps forward and 8 steps backward; - *Slide* 8 times to the right and 8 times to the left; - *Walk* 16 steps in any direction; and finally, - *Jump* 8 times. Children with low endurance levels will need the respite of a walking phase between the other locomotor movements. As the levels increase, both the nature and the tempo of the activities can be made more vigorous to develop greater cardiorespiratory endurance. Create a variety of activity patterns, and have each child do those patterns which are most appropriate for his particular exercise tolerance level. Encourage the children to work in groups, if possible, accompanying themselves with percussion instruments and creating their own combinations to multiple counts of eight.

UNIT III

Goal: Controlling tension and relaxation

Objective	Learning Experience
The pupil demonstrates an awareness of muscular tension.	• Help the children to become aware of tension by *feeling* the difference between tension and relaxation through an activity like the following: - Ask the children to "make a muscle" in one arm and then feel the tightness of the biceps with the opposite hand. - Explain how muscle becomes tense and why certain types of tension are necessary for performing tasks. - Then ask them to release the tension and feel the difference, calling particular attention to the feeling of tiredness after exertion. - Explain that our muscles sometimes fail to relax sufficiently after they have done their work, and that they often tense without our knowing it when we anticipate or think about an action, are nervous about something, etc. Emphasize how important it is to conserve the energy in our muscles until it is needed to perform a task. Have them repeat a cycle of activity in which they tense a muscle, relax it, and then rest — decreasing the amount of tension they produce each time (e.g., ask the children to tighten the muscle only half as hard as they can, then only a fourth as hard, etc., releasing the tension completely after each tightening). Additionally, you might have them tighten *all* the muscles in the body at once and then suddenly, or slowly, relax. Be sure that they *feel* the difference between the two states, for they cannot begin to control tension until they become aware of it.
The pupil demonstrates the ability to recognize muscular tension and to release it.	• Show the children how to recognize various degrees of tension and relaxation in the arms and legs. Then have them work in pairs and check each other for tension in these areas. Properly experienced, with neither assistance nor resistance from the subject, the testing activity should not only enable the children to recognize tension in others, but it should also increase their awareness of and ability to release tension in themselves.

Objective	Learning Experience
The pupil demonstrates the ability to reduce muscular tension through exercise.	• Demonstrate and then ask the children to perform a variety of stretching, breathing, shaking, and rhythmic exercises which affect different parts of the body and therefore promote differential relaxation. Some of the following activities might be used: EXERCISE 1 *Position:* Lying in a supine position with the arms close to the sides *Activity:* Simultaneously fling the right arm in a 180° arc and kick the left leg up until the back of the hand touches the floor beyond the head and the foot is raised as high as possible. Repeat with the opposite arm and leg, moving them rhythmically and in unison. EXERCISE 2 *Position:* Kneeling, sitting on a stool, or standing *Activity:* Swing both arms forward and sideward, brushing the thighs on each swing. EXERCISE 3 *Position:* Standing, with the feet about a shoulder's width apart and the arms at the sides *Activity:* Swing the arms forward and upward, stretching the body to a full extension on tiptoes and inhaling through the nose. While in full extension, reach out with each hand as if grabbing apples from a tree which are a little out of reach. Then drop the arms and the upper body in a sudden collapse, bending at the waist and hips and exhaling through the mouth. Shake the arms and head. After some of the exercises, have the children check each other for residual tension in selected parts of the body.
The pupil demonstrates the ability to reduce tension through conscious progressive relaxation.	• Have the children stretch out on mats or lie down on the floor with rolled-up towels under the small of the back and the neck. Ask them to close their eyes and place their arms comfortably at their sides. Then have them tighten a particular muscle group, release it, and rest. Work toward the *kinesthetic recognition* of tension and both the sudden, total release of tension and a slower, gradually developed, but equally complete state of relaxation. Over a period of weeks or months, progressively tighten and relax all of the major muscle groups in the body. Intersperse the tension control activities with breathing exercises, and have the children rest quietly for a few moments after each cycle of activity.
The pupil demonstrates the degree of relaxation attained.	• At the end of the session, ask the children to sit up slowly and look around at the others in the class. Many will rub their eyes; and some may have the slack jaw, the puffy face, and the relaxed look of children who have just awakened from sleep — which may indeed have been the case. Have them work again in pairs to test each other for residual tension in various body parts.
The pupil demonstrates the ability to utilize controlled muscle tension and release in game situations.	• Have the children play a modified game of Follow the Leader in which the leader changes the position of his body parts and performs locomotor movements at speeds which vary from slow to fast, "freezes" periodically, and then collapses like a rag doll. Demonstrate how the game is played; and then select a leader from among the volunteers or have the children play in small groups or pairs, like "Me and My Shadow." Change leaders often.

Objective	Learning Experience
	The object of the game is to enable the children to move with force and speed, to hold a position for a brief period of time, and then to release the tension required for the tasks of moving and holding — plus whatever tensions may exist in muscles *not* involved in the work of the activity. Develop the children's powers of observation by encouraging them to match the movements of their leader(s) exactly: the most perfect shadows then become the next leaders, and so the games goes.

Ronald C. Adams

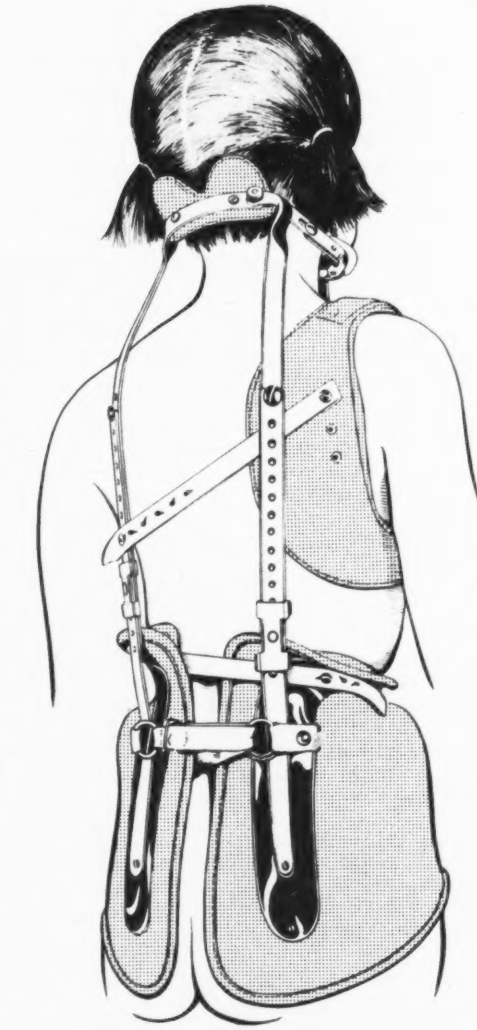
Director of Therapeutic Recreation and
Adapted Physical Education
Children's Rehabilitation Center
University of Virginia Hospital
Charlottesville, Virginia 22901

Preliminary Note

Rapid physical and emotional growth during adolescence makes children particularly vulnerable to certain illnesses which affect the developmental process. Some of these relate to the development of the spine and result in such deformities as *idiopathic scoliosis* (a lateral curvature of the spine*), *kyphosis* (an abnormal convexity or backward curvature of the spine), and *Scheuermann's disease* (a degeneration of one or more of the growth or ossification centers in the vertebrae, followed by regeneration or recalcification), otherwise known as *juvenile kyphosis* or *vertebral osteochondritis*. Unfortunately, these deformities are rarely identified in their initial stages; for despite the fact that good posture is basic to healthy growth, little attention is given to it in most physical examinations and education programs. However, in the firm belief that early detection may prevent serious medical problems later in life, more and more doctors and physical education teachers are urging local school systems to provide thorough postural evaluations for all children — preferably during the eleventh and twelfth years of age, because of the accelerated growth beginning at this level. In addition, they recommend that carefully planned programs of correction be provided for those who exhibit postural abnormalities.

Prior to 1946, most spinal deformities required surgery. But in that year a crude first model of what has come to be known as the Milwaukee brace was exhibited as an adjunct to the operative treatment of scoliosis; and by 1954, it had proved its value through clinical experience. Today, it is generally accepted by orthopedic surgeons as the first appliance in medical history to correct spinal deformities in growing children without operations.

The Milwaukee brace is a specially designed ambulatory brace (see illustration at right) used for treating idiopathic scoliosis in children and for controlling the disease in adolescents who develop a spinal curve near the end of their growth period. It is worn 24 hours a day, 7 days a week (except when the child is swimming or taking a bath), until growth has stopped. Reasonable correction of the deformity is usually evident within 3 months, after which the wearer is gradually weaned from the brace. Experience indicates that the weaning process should take at least a year.



MILWAUKEE BRACE

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*Depending on the etiology, there may be just one curve, or primary and secondary compensatory curves; also, scoliosis may be "fixed" as a result of muscle and/or bone deformity, or "mobile" because of unequal muscle contraction.

After a child has been fitted with a Milwaukee brace, he will need to develop skin tolerance, body awareness skills, and an understanding of the effects and limitations of the brace. Toward these ends, his therapy treatment should be extended through specific corrective exercises; and active participation in ongoing physical education programs should be encouraged — with some guidelines. Graded activities on the low balance beam are especially valuable for children who have just been fitted with a brace, because they aid in the development of kinesthetic awareness skills and help the wearer to compensate for anatomical distortions by requiring him to perform rotating or revolving motions with his body in positions where the forces are equally distributed on either side of a base of support. However, balance movements can cause early fatigue. For this reason, it is important to consider the nature, difficulty, and complexity of the routines in the child's program, and to limit his practice periods to 15 minutes a day. On this basis, the balance beam can be used indefinitely, but — as with any remedial agent — its limitations must be recognized and the contraindications for its use appreciated.

Gymnastic activities — including those performed on uneven parallel bars, still rings, and horizontal bars — are also recommended for Milwaukee brace wearers, if the following conditions are observed:

- The teacher must thoroughly understand the structure, mechanics, effects, and limitations of the brace.
- The fundamental skills in gymnastics should be developed through logical, graded sequences.
- Activities which require a flexible back (e.g., forward and backward rolls, tumbling, trampoline exercises) and flyaway and somersaulting apparatus dismounts which involve heights should obviously be avoided.
- Milwaukee brace wearers should *never* be allowed to act as human stabilizers in such activities as pyramid-building and dual stunts.

Contact sports and certain track and field events such as pole vaulting, the running broad jump, and the high jump should also be excluded from the pupil's program. But swimming, small craft activities, horseback riding, dancing, archery, bowling, badminton, tennis, volleyball, ping-pong, and a few track events such as short dashes and relays are perfectly acceptable. Three of these are especially useful for Milwaukee brace wearers:

- Swimming — because movements are performed outside of the brace;
- Archery — because movements are performed from a stationary position and involve static balance; and
- Bowling — because movements are associated with dynamic or moving balance.

Through the opportunities for movement exploration and analysis provided by these types of activity, the pupil can make better choices from among the sports, games, and recreational exercises that form an integral part of physical education programs in the junior and senior high school. Active participation in regular school programs is strongly recommended; for in addition to the desired achievements in his physical characteristics and abilities, the Milwaukee brace wearer needs contact with his peers, diversion, and respect as an individual. The physical education teacher can do much to promote a healthy personality development in his pupil by treating him as a normal student, by encouraging social contacts with his peers, and by providing an opportunity for emotional release through physical activity.

The following material suggests some approaches to physical education for Milwaukee brace wearers. In accordance with the description given above, the first unit deals with corrective exercise; the second, with improving body awareness through balance beam routines; and the third, with movement education through activities in swimming, archery, and bowling. Hopefully, the suggestions will stimulate further thinking along these lines by the teacher *and* the student. The material concludes with a very brief professional bibliography.

UNIT I: Corrective Exercise

(It is assumed that the student was first introduced to the exercises by a qualified physical therapist.)

Goal: Reduction of the spinal deformity

Objective	Learning Experience	Resource
The student demonstrates a knowledge of the value of corrective exercise:	• Explain to the student that increased, rather than diminished, activity is desired when wearing the Milwaukee brace. Mention that corrective exercises are to be done in the brace for the purpose of strengthening abdominal and intercostal breathing muscles. Emphasize the importance of doing the exercises correctly. It may be necessary for you to act as a model and complete the exercises first, before requesting such action from the student.	
To improve posture.	• Explain to the student that so long as he wears the brace, the movements of his torso will be limited; but if he learns correct foot placement and overcomes the tendency to tilt his head, he will stand erect, walk properly, and soon forget that he is wearing a brace. Remind him that good walking posture is important in and of itself, and as a base for more advanced movements such as running. It is also one of the first ways to gain self-confidence in the brace.	
	Then have him do the following exercise before a full length mirror: - Walk and stand tall. - Stretch the back of the top of the head toward the ceiling. - Tuck the stomach in and roll the hips under. The exercise serves to elevate the chest so that body alignment is exactly as it should be. Indicate these things to the student as he watches himself in the mirror, and correct when necessary.	A full length mirror
	• Explain to the student that the purpose of deep breathing exercises is to increase the amount of oxygen the lungs will handle. Then have him do the following exercises. Demonstrate them first, if necessary; or have him do them *with* you initially.	
To increase vital capacity. To strengthen the thoracic muscles.	*Deep Breathing* Have the student - Lie down on his back, with his knees flexed and his feet flat on the floor. - Close his mouth and inhale slowly through his nose until the abdominal, middle chest, and upper chest regions seem to be filled with air. - Exhale slowly, but continuously, through his mouth until his abdomen is flat.	An exercise mat (optional)

Objective	Learning Experience
	Side Breathing (not done by students with kyphosis) Have the student - Lie down on the curved side of his body, with the upper arm over his head, the other arm at his side under his body, his knees flexed, and his feet flat on the floor. - Inhale deeply, but slowly, to fill out the side of his body with the concavity. - Exhale slowly, and repeat.
To develop and maintain muscle tone while wearing the brace.	*Pelvic Tilt* Have the student - Lie down on his back, with his knees flexed and his feet flat on the floor. - Tighten the muscles of his buttocks. - Expand his chest, but continue to breathe regularly. - Force the small of his back to the floor by tightening his abdominal muscles and pushing downward. *Situps with Pelvic Tilt* Have the student - Lie down on his back, with his knees flexed and his feet flat on the floor. - Tilt his pelvis. - Lift his head, and gradually roll himself upward to a sitting position. - Remain in the sitting position for a moment; then slowly roll himself back to a supine position. - Release the pelvic tilt, and relax. *Pushups with Pelvic Tilt* Have the student - Lie down on his stomach with his legs straight, his feet together, his toes on the floor, his elbows bent, his hands at shoulder level, and his palms flat on the floor. - Push his body upward, with his knees bent. - Hold himself in that position for a moment; then slowly lower his body to the floor, and relax. - Rest a moment; then repeat the exercise, this time balancing on pointed toes, with his legs straight.
To reduce the spinal deformity.	• Before you have the student do the next two exercises, explain that this phase of the program is designed to correct the major curve of the deformity and encourage him to shift his spinal column while keeping his shoulders level.

Objective	Learning Experience
	Chest Expansion for the Correction of the Lordosis and Rib Hump Have the student - Stand tall, with his feet together and his hands at his sides. - Tilt his pelvis. - Inhale deeply and expand his chest. - Pull away from the thoracic pad, and walk in this corrected position. Place your hand on the concave portion of the curve, leaving space between it and the thoracic pad, and have the student force it toward the posterior bars. *Correction of the Major Curve* (not done by students with kyphosis) Have the student - Stand tall, with his feet together and his hands at his sides. - Tilt his pelvis. - Pull away from the thoracic pad and walk in this corrected position most of the day. • When the student is gradually being weaned from his brace, have him do his exercises in and out of it on alternate days. And when the brace is only worn at night, the exercises should be done without it.

UNIT II: Balance Beam Routines

Goal: Increased awareness of general body alignment in motor movements (both before and after the student has been fitted with a Milwaukee brace)

Objective	Learning Experience	Resource
	• Explain to the student that good balance is important in the satisfactory performance of nearly all movements required by everyday life and by all sport skills. The balance beam is an excellent tool for testing precision of movement; but even more important, it can teach the value of good posture as an expression of personality.	A low balance beam — 3"-7" high A high balance beam — 15"-24" high. Variations in height can be made depending on individual problems.
	The Milwaukee brace weighs approximately 5 pounds. Explain to the student that because the addition of this weight to his body will affect his equilibrium, he will need to adjust his body weight accordingly.	
	• Have the student measure his body awareness skills (before and after he has been fitted with the brace) by performing tasks on the balance beam, and then record the best results after two trials on a chart such as the one illustrated on the next page.	A stopwatch

Objective

The student demonstrates an awareness of the fact that a body is balanced when its center of gravity is over its base of support.

The student demonstrates an awareness of the fact that whenever one part of the body moves away from the line of gravity in one direction, the center of gravity shifts in that direction.

Learning Experience

BALANCE EVALUATION CHART FOR MILWAUKEE BRACE WEARERS

Name ________________________________

Date	Exercise	Time (in seconds, 2 minutes maximum)	Rating

Check for such faults as shifting the feet, tilting the head, moving the arms, etc.

- Explain to the student that adhering to the following procedures will provide uniformity of exercising or testing:
  - Remove shoes and socks or stockings. If this is impractical, then sneakers or tennis shoes should be worn.
  - Always approach the beam with the dominant foot.
  - Walk the board slowly.

Then have him do the following exercises:

Stationary (Static Balance) Exercises

Ask the student to feel and/or visualize an elongation and straightening of his spine — have him think of his whole body as being erect because of a sturdy line that passes through its entire length from his feet to his head.

Dynamic (Moving Balance) Exercises — eyes focused on the beam

Have the student

- Stand on one end of the beam, with his hands at his sides and his feet in a heel-to-toe position; then
- Slowly walk *forward* to the other end of the beam, in a heel-to-toe gait.

Record the best time and rating after two trials.

Have the student

- Stand on one end of the beam, with his hands at his sides and his feet in a heel-to-toe position; then
- Slowly walk *backward* to the other end of the beam in a toe-to-heel gait.

Resource

A balance evaluation chart (see example at left)

Objective

Learning Experience

Record the best time and rating after two trials.

Have the student

- Stand on one end of the beam, with his arms folded across his chest and his feet in a heel-to-toe position; then
- Slowly walk *forward and backward* from one end of the beam to the other in the heel-to-toe and toe-to-heel gaits used in the preceding exercises.

Record the best time and rating after two trials.

Place a chalkboard eraser in the middle of the beam, and have the student

- Stand on one end of the beam, with his hands at his sides and his feet in a heel-to-toe position;
- Slowly walk forward to the middle of the beam in a heel-to-toe gait;
- Pick up the eraser;
- Turn around; and
- Return to the end of the beam, using a heel-to-toe gait.

Record the best time and rating after two trials.

Have the student

- Balance himself on the beam,
- With his arms extended to the sides at shoulder level and
- His feet sideward, side by side, his weight on the balls of his feet.

Time the number of seconds he can hold his balance (not exceeding 2 minutes), and record the best time after two trials.

Have the student

- Balance himself on the beam,
- With his arms extended to the sides at shoulder level and
- His feet in a heel-to-toe position.

Time the number of seconds he can hold this balance (not exceeding 2 minutes), and record the best time after two trials.

Have the student

- Stand on the beam, with his arms extended to the sides at shoulder level and his feet in a heel-to-toe position; then
- Lift his left knee toward his waist, and
- Balance himself on his *right* foot.

Time the number of seconds he can hold this balance (not exceeding 2 minutes), and record the best time after two trials.

Objective	Learning Experience
	Have the student - Stand on the beam, with his arms extended to the sides at shoulder level and his feet in a heel-to-toe position; then - Lift his right knee toward his waist, and - Balance himself on his *left* foot. Time the number of seconds he can hold this balance (not exceeding 2 minutes), and record the best time after two trials.
The student demonstrates an awareness of the fact that greater stability is achieved when the center of gravity is lowered.	· By its very nature, the Milwaukee brace gives its wearer a rigid rather than a flexible back, thus forcing him to stoop instead of bend in lifting even virtually weightless objects from the floor. Explain to the student that stooping is safer than bending, even when he is not wearing the brace, because his weight is close to the line of gravity and his position more stable as a result. In helping him to develop the habit of stooping, emphasize the fact that many sports (e.g., tennis, volleyball, golf, badminton) require the player to pick up light-weight objects from the ground or floor. Then have him: - Stand on the beam with his arms extended to the sides at shoulder level and his feet sideward about 4"-6" apart, his weight on the balls of his feet; then - Assume a squat position by slowly bending both knees as far as possible, - Hold that position for 5 seconds, and - Return to his original position on the beam. Record the best rating after two trials.
The student demonstrates the ability to perform muscular movements without the use of visual clues.	· Explain to the student that most people depend on vision in maintaining balance — that is, they tend to identify a point of reference and position everything else, including themselves, in relation to it. However, success in such activities as dancing, running, archery, etc., requires the performer to focus *in the direction* of the intended movement. Kinesthetic awareness skills, which enable one to sense the process of muscular movements *without* visual clues, are therefore important for participation in sports, recreational activities, and the general movements of daily living. Help the student to improve his kinesthetic awareness skills by having him complete the exercises described in this unit *with his eyes focused straight ahead*, rather than on the balance beam. Record the results as indicated on the Balance Evaluation Chart.
The student demonstrates the ability to project his body into space by a quick contraction of the extensor muscles in his legs, accompanied by a forceful swing of the arms.	· Explain to the student that many sports activities (e.g., lay-up shots in basketball and volleyball) require jumping with emphasis on upper momentum. Then have him - Stand on the beam with his hands at his sides and his feet sideward about 4"-6" apart, his weight on the balls of his feet; - Bend his knees straight forward over his toes until his entire body leans forward with balance provided by a backward position of the arms; - Extend his legs in a jump, with a backward swing of the arms while the body is in the air; and then - Land back on the beam with his feet spread 4"-6" apart. Record the best rating after two trials.

Objective	Learning Experience
	Since one can more easily maintain his balance in landing from a jump if the base for landing is somewhat wide, the level of difficulty for this type of activity is increased by *narrowing* the base. Have the student repeat the exercise described above, gradually decreasing the space between his feet until he lands on the beam with his feet close together. Record the best rating for each distance after two trials.

UNIT III: Movement Education Through Selected Activities in Lifetime Sports

Goal: Postural improvement and reduction of the spinal deformity

Objective	Learning Experience
	• Explain to the student that swimming is an excellent medium for strengthening key postural muscles and for improving general body mechanics because, buoyed by the water, he will be able to execute movements he would be unable to do in other exercise media. Emphasize the fact that the principles of alignment of the various body parts are the same, whether these parts are positioned vertically or horizontally; thus the skills and knowledges gained through the activities described in units I and II are also applicable to swimming. Explain that the Milwaukee brace may be removed for swimming — but only for periods of *1 hour or less*, and these must be included in the "time out" which is usually allowed while the brace is being worn. Incidentally, sunbathing and sitting around the pool are not acceptable as substitutes for swimming!
The student demonstrates the ability to stretch muscle groups on the front of his chest and to strengthen muscles in the neck and upper back. (This objective is especially important for students with kyphosis.)	• Have the student practice inverted breast strokes, elementary back strokes, and the back crawl. Demonstrate and/or correct, when necessary.
The student demonstrates an awareness that side and back strokes are especially helpful in developing spinal flexibility, in strengthening the back muscles, in improving posture, and in correcting spinal deformity. (This objective is especially important for students with scoliosis.)	• Almost any swimming stroke will help in accomplishing the objective, but side strokes on the side that provides the best correction for the existing spinal deviation are the most useful because of the stretching action of the upper arm and the diagonal backward pull of the lower arm. The two activities that seem to have the best general application are the side stroke done on *both* sides and the back crawl start.

Objective	Learning Experience	Resource
The student demonstrates an awareness that certain physical movements will have more therapeutic value for him than others.	• If the student has kyphosis, explain to him that the crawl stroke may aggravate his condition because it requires that the swimmer keep his body as flat as possible, with his hips high and his shoulders fairly level, and because the overhand stroke is a pull until it reaches a point under the shoulder. However, the internal movement of the shoulder blade after this propulsive pull can have a therapeutic effect on kyphosis; so one aspect of the motion may offset the other. Encourage the student to practice breast strokes, elementary back strokes, the back crawl, and similar activities which will strengthen muscles in the chest, neck, and upper back. • When teaching the suggested strokes for swimming, there are several things to keep in mind: - Do the teaching in the water; use as little land drill as possible. If the student chills quickly, bring him out of the water and do land drills while he is getting warm. - Do as little talking as possible. Most students have difficulty translating verbalizations (e.g., skills which are simply *described*, rather than demonstrated) into action. Help them to learn through *doing*: Get them active and keep them active. Correct only major mistakes. - A workable teaching method is a short demonstration, followed by having the student attempt to do the same. Correct any major mistakes by *moving him through* the part that needs correcting; and then have him do the sequence with you, exactly as you have corrected it. Ask him to repeat the motions as often as necessary to reinforce the development of the skills involved.	
The student demonstrates an awareness that archery affords an opportunity to develop good posture and to strengthen superficial back muscles.	• Explain to the student that — if properly performed — archery is another recreational activity with great therapeutic value for postural improvement, developing balance and control, and strengthening superficial back muscles. Emphasize the fact that the pulling aspects of the sport involve balance and control because they require the archer to readjust his center of gravity in relation to a stationary base and the opposing forces of the bow and string. Then demonstrate and explain the following sequence of activity: - In assuming the proper stance for archery, one should face the target and then turn to the right (if he is right-handed) or to the left (if he is left-handed) and stand erect with his shoulders back, his chest expanded, and his head turned toward the target. Help the student to improve his stance — and therefore his posture — by asking him to imagine a straight line passing through the entire length of his body, from head to toe. - Once the archer has assumed the proper stance, he places the arrow on the bow and notches the feathered end to the bowstring. Then he lifts the bow into position, with the arrow resting lightly on the top of his bow hand, in preparation for the draw.	A bow and arrows A target and target stand Appropriate accessories (e.g., arm guard, bowstring)

Objective	Learning Experience	Resource
	- The primary draw is a pushing and pulling action which utilizes the upper arm, shoulder, and back muscles. - The secondary draw keeps the bowstring at full draw until the archer has completed his aim and released the arrow. In this activity, the shoulders move backward, the shoulder blades approach each other, and the upper back muscles "oppose" the pull of the bow being drawn. - Correct body alignment is required throughout, thus enhancing the therapeutic value of archery for students with scoliosis, kyphosis, and other spinal deformities.	
The student demonstrates an awareness that bowling is an excellent recreational activity for improving body alignment; for strengthening arm, leg, and trunk muscles; and for synchronizing movements.	• Explain to the student that bowling is another lifetime sport with great therapeutic potential. Enjoyed by people of both sexes and all ages, bowling requires poise, balance, a good aim, synchronized movements of the upper and lower parts of the body, and maximum use of gravity for force production. As such, it can be an interesting way to develop body awareness; to strengthen muscles in the arms, legs, and trunk; and to improve coordination and control. Then demonstrate and explain the following information: - The fundamental movement in bowling is the pendulum swing. The bowler stands facing the pins, with the ball held in one hand resting in the other, and his feet about 4"-6" apart. From this position, he leans slightly forward, bending his knees; takes a few steps forward; and puts the pendulum into motion by swinging the arm with the ball straight forward, then backward to a plane no higher than his shoulders, and forward again — all in one smooth effort. At an appropriate point in the final swing, he releases the ball but continues the forward motion of his arm and hand as a follow-through. Sensing the elevated side motion of the opposite arm will aid the relationship between weight transfer and balance. - The pendulum swing allows for maximum use of gravity; but the amount of force produced depends on the height of the backswing and this, in turn, requires greater strength of trunk and shoulder muscles in order to stabilize the shoulder position when a higher pushaway is used. The forward lean of the trunk is also useful in balancing the weight of the ball at the top of the backswing. - The number of steps taken in the approach ranges from 3 to 5, according to the bowler. Since one of the main reasons for the approach is to gain momentum, the bowler should move from his starting position to the foul line in a synchronized motion that will enable him to control the ball from the moment he starts the pendulum to the moment it strikes the pins. The number of steps he uses will therefore be determined by whatever works for him — so long as his approach is in a straight line with the desired direction of force.	A bowling alley, balls, and pins or A regular-sized polyethylene bowling game designed for use on gym floors as a lead-up game for regular bowling

Objective	Learning Experience
The student demonstrates an awareness that some sports and recreational activities will have greater therapeutic value for him than others, and he chooses accordingly.	• Because of the crouch position so often assumed during the approach, bowling is *not recommended* for students with kyphosis; but there is no reason to prevent them from participating in the sport, if they so desire. As indicated above, bowling is an excellent activity for developing body awareness and for improving muscle strength and coordination. In any event, the student with a Milwaukee brace will be limited in his ability to assume the undesirable position, because he cannot comfortably bend forward from the waist while wearing it. Thus the student should be allowed to bowl with his friends if he chooses to do so, but made aware of and encouraged to participate in sports and recreational activities which have greater therapeutic value for his particular condition.

SELECTED RESOURCES

Adams, R.C. & W.H. Bunch. *Balance beam exercises for Milwaukee brace wearers: an adjunct to regular recreational and physical education activities.* Inter-Clinic Information Bulletin. Vol XI, No. 3.

Blount, W.P. "The Milwaukee brace in nonoperative scoliosis treatment." *Acta Orthopaedica Scandinavica.* 33: 399-401. 1963.

______. "The Milwaukee brace in the treatment of the young child with scoliosis." *Archiv fur Orthopadische und Unfall Chirurgie.* 56: 363-369. 1964.

______ & Jane Bolinske. "Physical therapy in the nonoperative treatment of scoliosis." *Physical Therapy.* 47: 919-925. 1967.

______ et al. "The Milwaukee brace in the operative treatment of scoliosis." *Journal of Bone and Joint Surgery.* 40-A: 511-528. June 1958.

Cobb, J.R. "Outline for the study of scoliosis." *Instructional Course Lectures*, Vol. V. American Academy of Orthopaedic Surgeons. Ann Arbor: J.W. Edwards, 1948. pp. 261-275.

Conference Evaluation

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PARTICIPANT PROFILE

TOTAL NUMBER OF CONFERENCE PARTICIPANTS — 1290

Classification	Number
Pre-conference registrants	1080
At-conference registrants	210
Male registrants	555
Female registrants	735
School district teams (3-11 members)	57
Regents	1
New York State Education Department personnel	7
Board of Cooperative Educational Services personnel	30
Local board of education members	10
Administrators	3
School superintendents	6
Elementary school principals	8
Secondary school principals	9
Directors of physical education and/or special education programs	63
Department chairmen	4
Supervisors	14
Public, private, and parochial school teachers	450
College professors	5

Classification			Number
Psychologists			8
Guidance counselors			2
Librarians			3
Media personnel			16
College or university students			554
Ithaca College students		479	
Physical education majors	347		
Non-physical education majors	132		
Non-Ithaca College students		75	
Institution/agency personnel			65
Nurses			2
Therapists			25
Program assistants			4
Recreation workers			4
Volunteers			2
Medical inspectors			1
Clergymen			2
Community representatives			60
Public relations personnel			1

EVALUATION

Session	Option	Presentation Rating							Demonstration			
		POOR	FAIR	AVERAGE	GOOD	VERY GOOD	EXCELLENT	SUPERIOR	POOR	FAIR	AVERAGE	GOOD
I	A			3	12	27	48	22				
II	A	2	2		6	12	18	8				
II	B				7	10	10	8				2
II	C				1	10	10	4				
II	D			2	6	12	41	24			1	4
III	A						3					
III	B		3	6	8	3	7	6		4	2	8
III	C	1	4	1	6	5	3		1	3	2	3
III	D	2		2	6	5	2	2	2	1	1	9
III	E			1		1					1	
III	F	1	1			1	2		1			
IV	A	1	1	1		3	2			1	2	
IV	B				1	6	2	1			1	1
IV	C			2	3	12	28	18			1	1
IV	D				1	2						
V	A		1		1	1						2
VI	A	4	5	7	11	16	10	8	2	5	9	9
VII	A				1			4				1
VII	B			1		2	3	6			1	1
VII	C				5	7	7	5				2
VII	D			1		7	24	22			2	2
VII	E					1	2					
VIII	A					1	1	1				
VIII	B		1	2	2	1		1			3	2
VIII	C						2	1				
VIII	D				1	1	3	1				1
VIII	E				1	1					1	
VIII	F				2	5	9	2		1	1	

*Results are incomplete and erratic because the evaluation forms

REPORT*

Rating			Value and/or Usefulness Rating					
VERY GOOD	EXCELLENT	SUPERIOR	NO VALUE	LITTLE VALUE	AVERAGE VALUE	MORE THAN AVERAGE VALUE	GREAT VALUE	TOTAL RESPONSE
			1	4	31	46	22	112
			1	2	11	23	11	48
10	14	9			8	14	14	36
11	12	3			2	13	10	26
13	42	29		3	12	32	42	89
1	2					2	1	3
6	7	6		2	11	13	7	33
5	5			2	9	7	1	20
4	1	2		4	10	3	2	20
1			1					2
	2	1		1	1	1	2	5
3	2			2	1	3	1	8
3	4	1			3	5	1	10
7	27	24		2	10	26	24	63
4					4			4
					3			3
13	10	8	5	11	13	19	12	61
1		3		1		1	3	5
1	1	8			1	4	7	12
12	5	6			1	16	8	25
5	24	22			3	18	35	56
2	1	1				2	1	4
1	1	1				2	1	3
2		1		1	5	1	1	8
	2	1			1	1	1	3
1	4	1				1	4	7
1				1		1		2
5	10	4			4	8	9	21
								689

were not distributed or collected in all cases.

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...all that he is capable of

...all that he is capable of being.